TECHNOLOGY DEPT.

It's Important to Know In Time'

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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory — AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★ — Technical Governmental

Written To Be Read on Arrival'

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AUG 3 0 1944

DETROIT

Inside Dope

By George F. Taubeneck

Trouble Coming On the Home Front
Economic Chaos Will Follow Inaction
Anything Can Happen in Texas
That Fascinating Field, Medical Refrigeration
Refrigerated Surgery
Portable Units
Compound Fractures
Typical Unit
Psychoneurosthenia
Field Treatment
Serum Protection
Blood Plasma
Research Foundation

Trouble Coming On the Home Front

All hell may break loose in this country soon, and it won't be a pretty picture for our fighting men to contemplate. After having liberated Europe with guns and shells and courage and sleepless effort, they may return to a country which is far from the peaceful haven they've been dreaming about.

Millions may soon be unemployed. Practically no real effort is being made to make possible their re-employment. And they'll raise some frightful disturbances about it.

The CIO will be much in the headlines soon. There will be strikes to raise wages. There will be strikes for a closed shop. There will be strikes on any old pretext. Inasmuch as the New Deal has persuaded its *union* masters (or vice versa), that every man who works at a job owns it, we may have to go on producing tanks and landing barges long after there is any need for them. Or else millions will have to go on the bought-vote, government payroll again.

Economic Chaos Will Follow Inaction

We're headed straight downhill into another period of economic chaos.

An orderly transition to production of badly needed consumer goods would have been possible; it has been checkmated. An adequate pricing policy for consumer goods could have been formulated; it has been kicked around. A tax policy which would permit business to lay plans for reemployment could have been evolved; it has been pigeon-holed. A sound labor policy could have been stated and stuck to; it has been avoided.

The Administration has neither policy nor machinery to cope with the wave of strikes which are coming. Instead, it will again seek to reincarnate Moses and lead its children out of the wilderness—at the expense of our returning service men, who will be the taxpayers of the next generation.

Anything Can Happen in Texas

Industry friends in the Lone Star state will enjoy the following lines from the *Baltimore Sun*:

"For the first time in 52 years, Texas has had two rival irreconcilable Democratic conventions in session at the same time. But in view of the old saying that—

"Texas is a place with more rivers and less water, more cows and less milk, more preachers, and less religion, more hot days and more cold nights, where you can see farther and see less, than any other place on earth;

"And whereas, Gen. Phil Sheridan once said: 'If I owned hell and Texas, I'd rent out Texas and live in hell;

"And whereas it has been said that

(Continued on Page 6, Column 3)

C. E. Wilson Resigns WPB Post; Charges 'Unfair' Attacks

WASHINGTON, D. C.—Charles E. Wilson resigned Aug. 24 as executive vice chairman of WPB, declaring that he was stepping out because of "unfair attacks and criticisms" which he claimed were inspired by members of the personal staff of Donald M. Nelson, WPB chief.

He also made charges that the "Nelson group" had delayed partial reconversion to civilian production through a policy of "manana"—putting off until tomorrow.

It is believed that Mr. Wilson will return very shortly to his duties as president of the General Electric Co.

In a press conference Mr. Wilson declared that he and his staff have

(Concluded on Page 29, Column 1)

'Reconversion' Won't Apply to Appliances

WASHINGTON, D. C. — Previous predictions that the fourth reconversion order as issued Aug. 15 (permitting civilian production where men and material were available) would have little effect on major appliances, were borne out in statements made by WPB Chief Donald Nelson in a press conference held in conjunction with the announcement of the order.

Asked specifically if there was any hope for production soon of electric refrigerators or washers Mr. Nelson replied:

"Absolutely none."

The WPB chief explained that cer-

(Concluded on Page 29, Column 3)

Truesdell Heads Crosley Sales

CINCINNATI—L. C. Truesdell has been appointed sales manager of the manufacturing division of Crosley Corp., while B. T. Roe, manager of distribution, has resigned to become vice president and general manager of the J. M. Ceazen Co., Los Angeles distributor, announces J. H. Rasmussen, Crosley commercial manager.

Mr. Truesdell comes to Crosley from Frigidaire Division, where since 1939 he had managed the major dealer development department. He joined Frigidaire in 1933 as sales manager of the Kansas City branch. Previously Mr. Truesdell was sales promotion manager and refrigeration

(Concluded on Page 29, Column 2)

Food Poisoning Puts Hospital on 'Limited Service' Basis

ROCHESTER, N. Y. — With 90 members of the resident staff of Strong Memorial Hospital here affected by food poisoning last week, it was necessary for the hospital to announce that only emergency patients could be admitted to the hospital for a period of several days.

Medical observation cases were not admitted and only emergency operations were to be performed. The belief was expressed by hospital authorities that it would be "about a week before those affected will be able to return to duty."

Exact cause of the food poisoning had not been determined, but it was thought that the source might have been some egg salad sandwiches served in the hospital staff cafeteria. (In most cases of this sort the cause has usually been traced to some improperly refrigerated foodstuff.)

I.C.I. Forum Will Plan Promotion Of Conditioning

Meet In Detroit Sept. 21 To Plan Program of Public Education

DETROIT — "When the building industry gets the green light, manufacturers of air conditioning equipment will have only t'emselves to blame if they don't ge' a higher percentage of the construction dollar," stated P. B. Zimmerman, president of the Indoor Climate Institute in announcing the first big Open Forum Meeting of the organization to be held in Detroit, Sept. 21 and 22.

"Controlled indoor climate is the 4th Dimension in Living. It ranks in importance with food, shelter, and clothing. That is why the Indoor Climate Institute is holding an Open Forum in order that members of the related industries will have an opportunity to take a square look at the many facts and subjects that have a direct bearing on the present and postwar markets for their products," stated Mr. Zimmerman. "Above all, it will give them an opportunity to have a voice in molding public opinion to a point where the living standards of Americans will be increased through obtaining greater indoor comfort and health."

Labeled as a Conservation and Postwar Planning Conference, the Open Forum is timely and in keeping with the spirit of cooperation necessary to assist the public in going through the forthcoming winter with highly restricted fuel supplies, due to the war. The Annual Meeting and

(Concluded on Page 32, Column 1)

Reconversion Pricing Plans Are Outlined

WASHINGTON, D. C.—Some probable trends in pricing control during the reconversion period were described by OPA Administrator Chester Bowles in a recent press conference here.

Pointing out that inflationary tendencies would continue and possibly increase during reconversion, Mr. Bowles made it clear that price controls will remain during that period.

Prices on consumer durable goods will possibly vary for the same type of equipment, he said, this being determined by whether the plant was partially converted to civilian goods, and partly on war production. Those still doing part war production might be considered at an advantage from a cost standpoint.

Washers were cited by Mr. Bowles

(Concluded on Page 32, Column 5)

Amana Society To Make Home Freezer

AMANA, Iowa—Home freezers in several sizes will be produced by the Refrigeration Division of the Amana Society here, manufacturer of complete frozen food locker plants and refrigerated display cases and coolers, announces George Foerstner, head of the division.

Extra large storage capacity with no waste space due to inaccessible areas is claimed for the new line, which will be top opening to provide easy access to frozen foods. Cabinets will have rounded edges and corners to permit easy cleaning. The Amana Society will aim at both urban and rural markets with the line covering a broad size and price range, it was said.

Macy Slashes Prices Of Rebuilt Freezers

NEW YORK CITY — Indications that certain well-informed parties are expecting new models of home freezers on the market soon is to be seen in the advertisement of R. H. Macy & Co. in New York City newspapers of Aug. 20 advertising "remanufactured freezers" at price reductions of from $100 to $300 per unit.

Price slashes included a cut of from $299 to $199 for the 200-lb. capacity model, and from $944 to $699 for the 1000-lb. model.

Carrier To Sell New Stock Issue; Expansion Seen

SYRACUSE, N. Y.—Carrier Corp. will add $2,000,000 to its capital through a new preferred stock issue, approved by stockholders at a meeting here Aug. 15, and is now in a position to borrow up to $12,000,000 against war contracts.

Much of the new capital will be devoted to "improvements to present manufacturing facilities, which means that the corporation intends to purchase substantial amounts of new machinery and equipment," declared Cloud Wampler, president of Carrier, when questioned about the rumor that the company is looking for a 100-acre or more building site.

There will be some plant expan-

(Concluded on Page 29, Column 4)

50% Solder Okayed For Repair Service

WASHINGTON, D. C.—Solder containing 50% tin by weight may now be used in the manufacture, maintenance, and repair of refrigeration equipment, and of radio equipment, according to an amendment to the Tin order M-43 issued Aug. 21.

Formerly, 50% solder was permitted for use only in the manufacture of ammunition box liners.

Solder containing not more than 35% tin by weight may be used for the manufacture, maintenance, and repair of electrical equipment and appliances, and electric motors.

The amended order provides that no wholesale distributor of solder shall deliver any solder to any user, and no user shall accept delivery of

(Concluded on Page 32, Column 3)

55 Firms To Exhibit At Locker Convention

DES MOINES, Iowa—Exhibit facilities at the National Frozen Food Locker Association annual convention starting Sept. 25 at Columbus, Ohio, have been fully engaged by 55 firms, it has been announced by association headquarters here.

This exceeds by 10 the number of companies exhibiting at the 1940 convention, formerly the high mark for exhibits.

The convention will open Monday morning, Sept. 25 and will continue through Wednesday afternoon, Sept. 27. There will be a registration fee for non-members, excepting those firms having exhibits, who will be allowed five registrations without charge.

Among the topics scheduled for discussion at the convention are "The Locker Plant of Tomorrow and Its Possibilities," and "Home Storage and Zero Units and How They Can Be An Asset To the Locker Plant Industry."

'Freon' by Oct. 1 Seen; New Plant Opens on Time

Will Probably Handle All of Requirements Of the Military

WILMINGTON, Del.—More "Freon" for civilian uses will almost assuredly be available after Oct. 1.

This prediction is based upon the announcement by Kinetic Chemicals, Inc., producer of "Freon," that its East Chicago, Ind., plant fulfilled its promise to WPB and commenced operations Aug. 15 as scheduled.

First shipment from the plant is expected shortly. Thereafter the plant will take up its share of the load and is expected to make enough "Freon-12" to support the entire aerosol program of the armed forces.

The East Chicago plant will relieve to a great extent the load on the Carney's Point, N. J., plant of the company, and it is expected that greater amounts of "Freon-12" will be available for civilian consumption from Oct. 1 onward.

The plant in Indiana is not equipped to load small cylinders, but will confine itself during the war period to making shipments in 1-ton drums on multiple unit tank cars.

For the service of the armed forces Kinetic Chemicals, Inc., is building a plant at Stege, Calif., at which small cylinders will be loaded from 1-ton drums. This plant will probably also load some civilian cylinders for use in the West Coast area. It will be completed and ready for operation some time during the month of September.

The one cloud on the horizon of increased "Freon" supplies is the matter of the supply of hydrofluoric acid, which may become short because of the increased demand for this chemical in the iso-octane program. It is used as an alkylation medium in the process devised by the Universal Oil Products Co., and a number of iso-octane plants have been built which require it.

Some Theaters Will Be Given 'Freon-12'

WASHINGTON, D. C. — A small amount of the refrigerant "Freon-12," has been made available for distribution to theaters where lack of this refrigerant has caused acute hardship, WPB reported last week.

Theaters seeking "Freon-12" are requested to submit the following information to WPB:

Weekly average attendance of theater, number of hours per week that the theater operates, whether or not the theater has been closed because of a lack of this refrigerant, whether or not attendance has decreased as a result of a shortage of "Freon" and if so, the percentage of such decrease; the normal supply of "Freon" needed to fill air conditioning system completely, and the approximate number of unused pounds of "Freon" now in the system.

This information should be submitted in letter form as an appeal under Order M-28, and should be addressed to Franklyn B. Millham, General Industrial Equipment Division, War Production Board, Washington, 25, D. C. Three copies of the letter are required.

On the brighter side of the picture is the fact that the supply of carbon tetrachloride, one of the raw materials used in the manufacture of "Freon-12" and at one time a critically short material, now seems to be in adequate supply.

'Green Light' Probable Soon For Domestic Coal Stoker Production

WASHINGTON, D. C. — Domestic type coal stokers for residential use are urgently needed for civilians, William Y. Elliott, Vice-Chairman for Civilian Requirements, told the Stoker Industry Advisory Committee at its recent meeting.

These stokers are needed for conservation of fuel and manpower, Mr. Elliott said.

Production of domestic stokers was discontinued early in 1942. However, since manufacturers had been requested to reserve in their inventories sufficient parts to take care of repairs for four winters, domestic stokers have been kept in operation, Henry S. Norris, Government Presiding Officer, told the Committee.

MAY GET SOME MOTORS

A representative of the Office of Civilian Requirements told the Committee that it is possible that a small quantity of fractional horsepower motors may be made available for production of domestic stokers.

Committee members expressed the opinion that a number of domestic stokers are beyond repair because no replacements have been made during the past two years.

It was the consensus of the Committee that a majority of manufacturers in the industry could go into limited production. Members explained that if manufacturers receive allotments of material far enough in advance to get on mill schedules, they could obtain such material. Sufficient plant capacity is available, members said.

Committeemen said that because of the difficulty in getting sheet steel, castings, and fractional horsepower motors and because approximately 90 days are required to complete production after material is put into process, no substantial production of domestic stokers can be possible before the first quarter of 1945. They estimated, however, that a small number of such stokers could be manufactured during the fourth quarter of 1944, if production were permitted.

STOKER DEMAND IS UP

In reporting on production of commercial and industrial stokers, Committee members said that the demand for these stokers had increased because of the lack of manpower and the difficulty of hand-firing the low-grade coal now available. Shipments of the larger type industrial stokers are on time, but shipments of smaller sizes, generally used in small apartments and stores, are behind schedule because producers did not anticipate the increased demand, it was reported.

Committeemen also pointed out that production of domestic stokers would reduce the demand for the smaller industrial type stokers, but would increase the demand for larger industrial stokers because of increased dealer activity.

Plumbing and Heating Division officials explained that increased demand for smaller size stokers would necessitate a request for an amendment to the present WPB program determination. The proposed amendment would make material available for the smaller stokers.

A representative of the Solid Fuels Administration told the Committee that production of high quality coal is not sufficient to meet all needs. At present the indication is that there is going to be a shortage of quality coal mined in the East, he said. Eastern states and the Great Lakes area will be short on bituminous stoker coal, but the supply of such coal in middle western and western states probably will be adequate, the representative said.

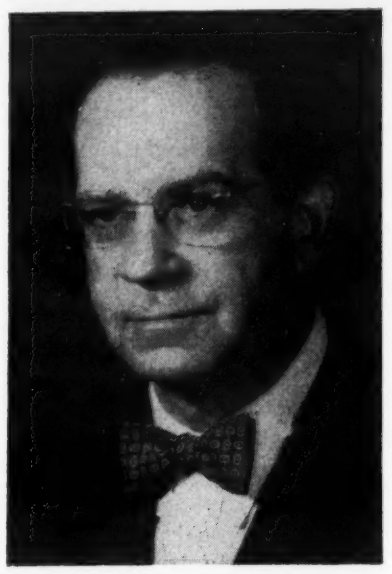
The present regulation permitting only ⅞ of normal requirements of anthracite for civilians was devised to spread the shortage among all civilian consumers, the Committee was told.

Clippinger To Leave Admiral After War

CHICAGO — Ross D. Siragusa, president of Admiral Corp., made known at the board of directors' meeting held recently the intention of J. H. Clippinger, vice president in charge of sales, to resign from active participatition in Admiral Corp. at the end of the war.

Clippinger in his letter to the board stated that he is resigning because of health of his family which necessitates their moving from this locale. He also stated that he will remain with Admiral until all war contracts are terminated, after which he will rejoin his family.

On Servel's Staff



H. C. JAMERSON

* * *

Jamerson With Servel Gas Conditioning Division

EVANSVILLE, Ind.—H. C. Jamerson has joined the gas air-conditioning division of Servel, Inc., here to take charge of coordinating the gas air-conditioning sales story and creating a salesmen training program for this product, announces John K. Knighton, sales manager of the division.

Mr. Jamerson has been out of the air-conditioning field for several years, but was formerly sales manager of Chrysler Corp.'s Airtemp Division, and was also advertising and sales promotion manager for the corporation's DeSoto Division.

At one time he was sales manager in charge of product distribution for Frigidaire Division of General Motors. A native of St. Louis, Mr. Jamerson was graduated from Harvard in 1915.

McConnell Will Head Wesco Central District

NEW YORK CITY—Appointment of H. I. McConnell as Central District manager of the Westinghouse Electric Supply Co., with headquarters in Detroit, Mich., has been announced by D. M. Salsbury, general manager of the company.

Hazards of Heat To Plant Workers Told By Safety Institute

NEW YORK CITY—Hot summer weather can bring added dangers to industrial workers if refrigeration and ventilation facilities are not properly handled, warns the Safety Resarch Institute here in a bulletin recently issued.

Added care should be observed in the handling and refrigeration of food in plant cafeterias, and strict attention should be paid to sterilization of dishes and utensils, points out the Institute.

Temperature of drinking water should be maintained between 40° and 80° F., with 50° F. being preferred, and salt and dextrose tablets should be placed beside drinking fountains to prevent heat exhaustion due to heavy perspiration.

Ventilation is of extreme importance, the Institute declares, pointing out that comfort of workers can be considerably improved during the summer months by maintaining a rate of ventilation sufficiently high to cool the occupants of a workroom by rapid evaporation of perspiration.

Extreme care must be exercised where highly volatile organic solvents are employed in operations, especially since many such solvents readily form excessive concentration of vapor in hot atmospheres. If local exhaust ventilation is provided for solvent tanks, workers are warned not to open windows for natural ventilation, since these currents of air may disperse unsafe amounts of vapor into the workroom.

Unqualified employes should not be allowed to tamper with ventilating devices provided for safety.

Nash-Kelvinator Net For Quarter $677,549

DETROIT—Nash-Kelvinator Corp. reports for quarter ended June 30, 1944, net profit of $677,549 after all charges including provision for income taxes. This reduction from the $809,088 profit reported for the same period of the previous year, despite an increase from $52,426,000 to $66,741,000 in value of output, reflects increases in income tax rates as well as reductions in fees on government contracts.

There's a Wide Postwar Market for

EFFICIENCY

CURTIS ~~Comfort~~ Cooling

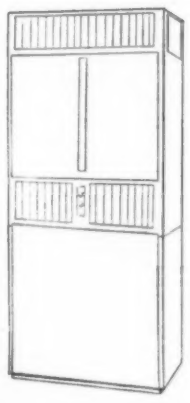
Before the War, "Comfort Cooling" was the accepted term as applied to air conditioning. But recent years have so thoroughly proven the extensive benefits resulting from proper air conditioning that we believe it should be called "*Efficiency Cooling.*"

Efficiency Cooling means all that the word implies. For Air Conditioning protects health, improves employee morale, speeds up production, reduces human errors in office and factory. In industrial applications, it increases the efficiency of the mechanical production and prevention of waste. In retail stores, it makes for a more profitable operation in attracting customers, inviting them to stay longer and purchase more.

So let's call it *Efficiency Cooling*, for Air Conditioning, properly applied, goes far beyond mere comfort; its results can be measured in dollars and cents, in increased production, in increased sales.

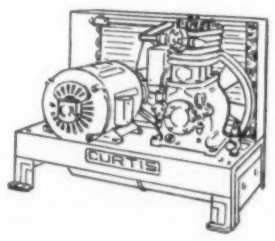
You'll find the efficient, economical dependability of Curtis Units a good companion to the new phrase — *Efficiency Cooling.*

CURTIS REFRIGERATION AIR CONDITIONING AND COMMERCIAL

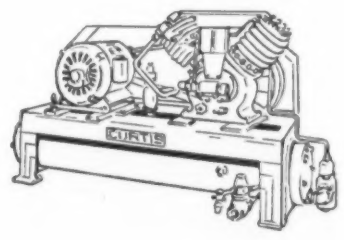


3 and 5 ton Packaged Air Condition Units. Remote Type Units of 7½, 10, and 15 tons.

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1912 Kienlen Avenue St. Louis 20, Missouri



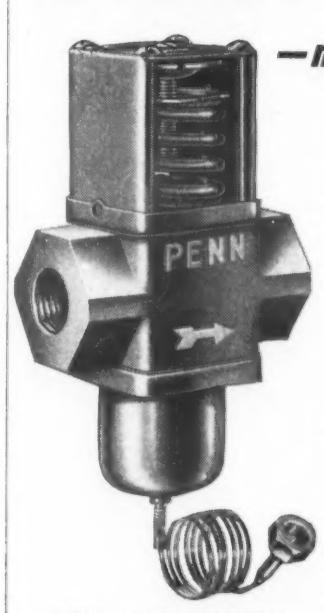
1½ H.P. Air-Cooled Condensing Unit



15 H.P. Shell and Tube Condensing Unit

The lobster's at home under water

—*not so with sliding parts!*



PENN Series 246 Water Regulator (threaded type) . . . also available in flanged style . . . both allow for manual flushing.

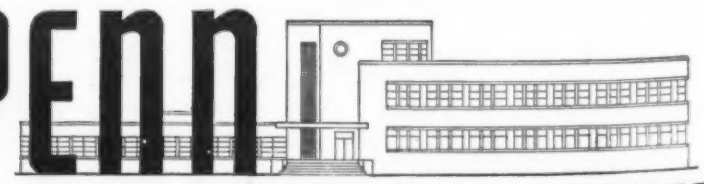
Sliding parts can't survive in water . . . yet you can't build a water valve without them! That's why PENN designed the new Series 246 Water Regulator so that *no sliding parts touch the water.*

Hence these vital parts are free from rust and corrosion . . . free from the harsh deposits which water forms.

Put this valve to the test! You'll find *no premature wear, no sticking seats.* No water hammer, either . . . yet the valve is extremely sensitive to head pressure changes.

If it's trouble-free performance you're after, look no further! Ask for your free copy of Bulletin R-1986, containing full information on this new PENN water valve. *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 East 40th Street, New York, 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

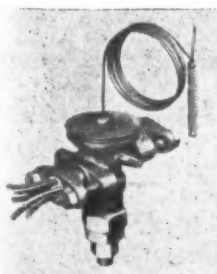
Climate...enemy or friend

"DL" Products Help Make The Difference

Climate is a friend if it helps *us*, or hinders the enemy. Climate is an enemy if the reverse is true. It has been a factor in every war—an exceptionally powerful factor in this war. Almost every extreme and rigor is encountered in worldwide operations, affecting every military element from troop movement to photo reconnaissance.

"DL" Refrigeration Controls and "Detroit" Expansion Valves help preserve food supply, and furnish cool conditioned air in the hot, steamy jungle of the South Pacific, on the seven seas, in fact, wherever the United Nations are fighting. Other "DL" controls regulate temperature of chemicals in photo processes, refrigerate a variety of biological products—do many tasks to help give our fighting forces the edge.

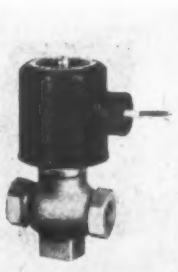
"DL" products have been the leaders in the refrigeration field for many years. If your present production or postwar planning calls for expansion valves, solenoid valves, or controls; specify "DL" for complete satisfaction.



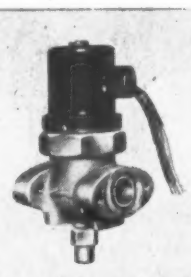
No. 788 Dura-fram large capacity Thermostatic Expansion Valve, with No. 790 Distributor, showing the distributor tubes and equalizer connection.

No 673 Thermostatic Expansion Valve. For many years the standard of the refrigeration industry.

No. 897 Dura-fram Thermostatic Expansion Valve for commercial applications. Compact and easy to install.



No. 683-3 Solenoid Valve. Quiet in operation, ample power. Available for any standard voltage.



No. 686—Large pilot operated Solenoid Valve. Has manual opening feature.

No. 450 Model ZL-1 Temperature Control with outside adjustments and visible scales.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT 8, MICHIGAN

Division of American Radiator & Standard Sanitary Corporation

Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"DL" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • Radiator Valves and Balancing Fittings • Arco-Detroit Air and Vent Valves • "Detroit" Expansion Valves and Refrigeration Accessories • Air Filters • Stationary and Locomotive Lubricators.

9 Appliance Manufacturers Explain Sales Policies at D. W. May Meeting

NEW YORK CITY — Apparent trend toward the establishment of factory branches to replace appliance distributorships in this area has been countered by nine refrigerator, radio, television, and electrical appliance manufacturers, who have announced the appointment of the D. W. May Corp. as distributor for the New York district.

These manufacturers declared that they felt the distributor setup was "the best means of getting their planned expanded production to the consumer in the postwar period."

FAIR TRADE LAWS TO APPLY

Representatives of the nine companies outlined their postwar production and distribution plans at a meeting of some 1,500 retailers at the Hotel Commodore, presided over by D. W. May, who stated that his complete line will be sold under state fair trade laws.

The nine manufacturers were Farnsworth Television & Radio Corp., Coolerator Co., Health-Mor, Inc., Electromaster, Inc., Wilcox-Gay Corp., Barlow & Seelig Mfg. Co., Glenwood Range Co., Hubeny Brothers, and the Ken-Rad Tube & Lamp Corp.

John H. Ganzer, vice president of Coolerator Co. of Duluth, disclosed that his company, which before the war had marketed its annual production of 75,000 ice-cooled refrigerators through ice dealers, is now planning to put an annual postwar production of 150,000 such units on the market through distributor-dealer channels.

The company plans to similarly market annually 100,000 electric refrigerators, an item it has not heretofore produced, and 50,000 home freezers.

In commenting on probable manufacturing dates, Mr. Ganzer said the ice-cooled refrigerator industry expected to abandon masonite and again use steel in its products "before the end of the year."

ELECTROMASTER'S PLANS

Gerald Hulett, vice president of Electromaster, Inc., of Detroit, revealed that his company expected to produce 100,000 electric ranges or twice the number it produced before the war. He noted that steel and nichrome wire still remain in a comparatively tight supply, and that his company is located in a labor area expected to remain critical for some time.

Mr. Hullett said that Electromaster, which before the war marketed its production through utility outlets, is now setting up approximately 25 distributorships "to tap Eastern markets it never touched before."

To achieve an efficient production and distribution, the company also is cutting down the number of its models from 12 to three or four. This model curtailment, Mr. Hulett explained, would not only enable better and cheaper production runs but would also reduce distributors' and dealers' inventory costs, thus enabling the company to become "the Ford of the electric range industry."

Albert E. Kramer, vice president of Health-Mor, Inc., said his company expected to start partial production of vacuum cleaners by next May. The company, which produced 60,000 cleaners a year before the war, has inventories which will enable a quick start in resumed production, he added.

Warren Hasemeier, vice president of Wilcox-Gay Corp., of Charlotte, Mich., declared that while the production of recording units requires three critical components, motors, tubes, and transformers, his company felt that it would be among the first to reconvert to such production once the peak of Navy and Signal Corps orders was passed. He said his company would confine its activities to distributors and would wait "at least six months after the war to see how things stand," before considering distribution through utilities.

PREDICT TELEVISION BOOM

Honor guest at the meeting was Dr. Alfred N. Goldsmith, vice chairman of the Radio Technical Planning Board and chairman of Panel No. 1 of the planning board, which is studying the setup for all future frequencies for radio, television, and other services.

Asserting that television has "arrived," Dr. Goldsmith said the high unit price of television equipment would prove a boon to dealers with energy enough to get into the field prepared to sell and demonstrate television sets as "entertainment for today, not 20 years hence."

Production of Civilian Radios Awaits Fall of Germany, WPB Tells Industry

WASHINGTON, D. C.—Production of civilian radios will be resumed after Germany surrenders, and not before such time, the Radio Industry Advisory Committee was told by leading WPB officials at a meeting here last week.

These officials told the committee that the radio-radar production program for 1944 must continue upward through next December and about 16.4% above the July output rate. Army and Navy officials concurred in this estimate of over-all increase during the remainder of the year.

WPB Vice Chairman Charles E. Wilson said:

"Many governmental controls may be removed after Germany surrenders and the over-all war production program probably will be reduced by about 40%."

Mr. Wilson said that controls would be removed as soon as possible, but urged the radio and radar industry to maintain its present high levels of war production until after Germany surrenders.

Both Vice Chairman Wilson and Director Ray C. Ellis of the Radio Division told the committee that cutbacks, after the collapse of Germany, might yield a sufficient supply of raw materials to enable civilian production without quota restrictions since the amounts of steel, copper, and other raw materials needed by the radio industry are comparatively small. In any event, there will be no authorizations for civilian production, beyond that currently permitted, until after the German collapse, officials advised the committee.

In discussing the "spot" authorization order of Aug. 15, WPB officials pointed out that radio, as well as automobile, electric refrigerator and washing machine production, was excluded from the civilian output program. They said that though some WPB limitation orders have been rescinded or modified in the present civilian program, the L-265 order restricting civilian radio production was left untouched.

Forthcoming OPA price ceilings also were discussed by the committee. Mr. Jacobs, of the OPA Radio Section, said that OPA advisory committees of sets and parts manufacturers would soon be announced and meetings arranged in mid-September to work out specific civilian price ranges.

Flatiron Producers Agree on Prices Of March, 1942 For New Irons

WASHINGTON, D. C.—Price Administrator Chester Bowles announced Aug. 17 that 20 manufacturers who have allocations to produce 1,768,968 electric irons have agreed to market them at no change from their March, 1942, prices.

One of the first items in the consumer durable goods field that will reappear in the market since production was suspended in 1942, the new electric irons will bear price tags on which manufacturers will state the dollar-and-cents retail ceilings. The Office of Price Administration has authorized specific retail prices according to manufacturer and model number, ranging from $5.30 up to $11.70. The bulk of the irons are automatic models in the medium price range, from $5.70 up to $8.75.

The irons for which OPA established these maximum prices will be made by 16 manufacturers and will represent 81% of the 2,037,838 to be produced under War Production Board authorizations announced up to July 20, 1944. The manufacturers had stated on their applications to WPB that they would produce their allocations of irons at March, 1942, prices.

Four other producers who account for an additional 6% of the allowed production also indicated they would sell at March, 1942, prices. Eight manufacturers of low priced irons with 12% of the authorized production said that an increase over their March, 1942, ceilings is necessary. Prices for these 12 producers will be established later. An additional 1% of the production represents irons for commercial users.

In addition, OPA listed types, quantity to be sold, and retail selling price ceilings for irons to be sold by two large non-manufacturing retailers, the irons to be manufactured for them on contract.

Wholesalers' ceilings will be the lower of either (1) the highest price charged for the same iron to each class of purchaser during March, 1942, or (2) the retail ceiling (reduced by the amount of the federal excise tax) less 40% for sales in quantities of six or more units, or less 35% for sales in quantities of less than six units.

The prices are subject to terms, discounts, and allowances no less favorable than those in effect during March, 1942, on sales of similar articles by the seller. Wholesalers are required to notify in writing purchasers for resale of the maximum prices and conditions set for resales by the purchasers.

Manufacturers' Retail Prices

Name	Quantity	Model No.	Description	Retail Ceiling Price Inclusive of Federal Excise Tax
American Electrical Heater, Detroit	40,000	55AB	Automatic 1,000 watts	$9.40
Chicago Electric Co., Chicago	175,000	242A	Automatic 880 watts	6.50
Chicago Flexible Shaft Co., Chicago	162,500	A4	Automatic 1,000 watts	9.95
Dominion Electrical Mfg. Co., Mansfield, Ohio	35,000	246	Automatic 1,000 watts	8.40
General Electric Co., Bridgeport, Conn.	100,000	116F112	Automatic 660 watts	5.70
General Electric Co., Bridgeport, Conn.	321,500	116F115	Automatic 1,000 watts	8.55
Knapp Monarch Co., St. Louis	192,000	400R	Automatic 1,000 watts	5.95
Landers, Frary & Clark, New Britain, Conn.	73,401	0184	Automatic 1,000 watts	9.40
Landers, Frary & Clark, New Britain, Conn.	24,467	0174	Automatic 800 watts	6.75
Manning-Bowman Co., Meridan, Conn.	38,500	2494	Automatic 1,000 watts	11.70
National Stamping & Electric Co., Chicago	8,800	351	Automatic 1,000 watts	8.35
Procter Electric Co., Philadelphia	102,800	975	Automatic 1,000 watts	9.30
Samson-United Corp., Rochester, N. Y.	38,500	5000	Automatic 1,000 watts	8.55
Superior Electric Products, Inc., Cape Girardeau, Mo.	33,000	220	Automatic 1,000 watts	6.95
Tennessee Valley Associates, Nashville, Tenn.	2,000	100	Non-Automatic 615 watts	7.60
Waage Mfg. Co., Chicago, Ill.	2,400	63B	Non-Automatic	5.30
Westinghouse Electric & Mfg. Co., Mansfield, Ohio	120,000	LPC414	Automatic 1,000 watts	8.75
Westinghouse Electric & Mfg. Co., Mansfield, Ohio	37,000	LR24	Automatic 700 watts	5.95
Winsted Hardware Mfg. Co., Winsted, Conn.	25,000	191	Automatic 750 watts	7.10

Mail Order House Prices

Name	Quantity	Model No.	Description	Retail Ceiling Price (Exclusive of Federal Excise Tax)
Montgomery Ward, Chicago	20,000	86-2699	Automatic 800 watts	$5.75
Sears, Roebuck Co., Chicago	93,500	20-6246	Automatic 1,000 watts	6.95

Capsules OF LIFE OR DEATH!

Valves—that's what these are—and their innocent appearance serves only to conceal their importance. For these valves are to modern warfare what the famous "horseshoe nail" (for the want of which the battle was lost!) stood for in the simpler fighting days of two hundred years ago. Designed for the control of oil, gas and other fluids, they are in active wartime service in aircraft of all types on every fighting front.

The four Weatherhead plants have long been fully engaged in making vital parts for the nation's war machines at the rate of more than a million a day—and are prepared to make the same gigantic contribution to the peacetime needs of the nation!

Look Ahead with

Weatherhead

THE WEATHERHEAD COMPANY, CLEVELAND, OHIO

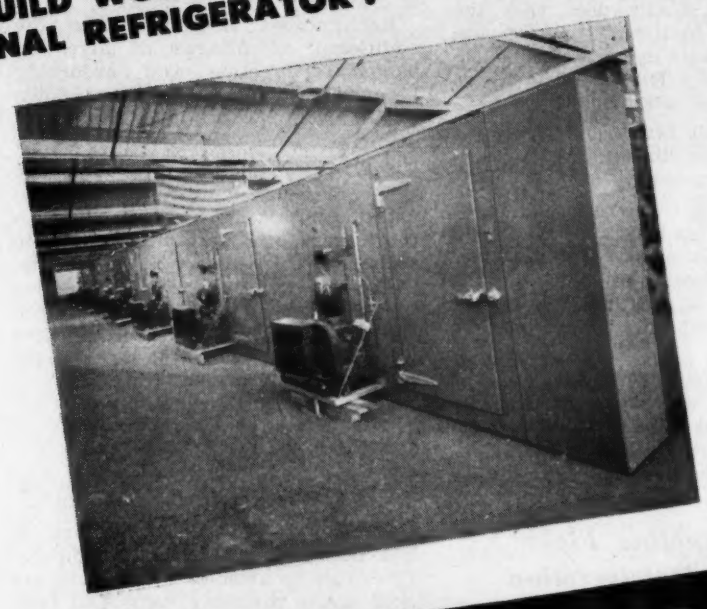
Manufacturers of vital parts for the automotive, aviation, refrigeration and other key industries.

Plants: Cleveland, Columbia City, Ind., Los Angeles
Canada—St. Thomas, Ontario

FREE: *Write on company letterhead for "Seeds of Industry"—a history of The Weatherhead Company, its many facilities and diversified products.*

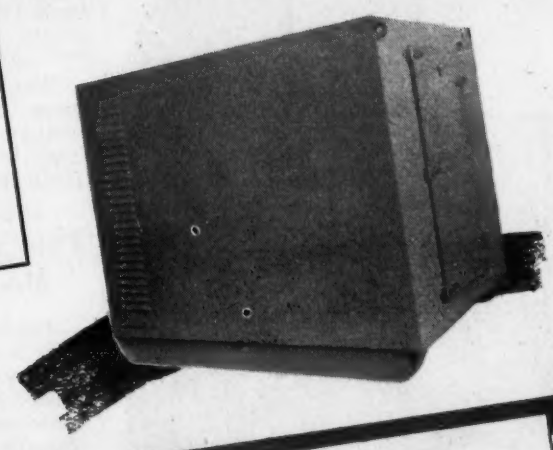
WEBER *first* in the industry ★★★

. . . FIRST TO BUILD WORLD'S LARGEST KNOCK-DOWN, SECTIONAL REFRIGERATOR!



hundreds of these refrigerators—each 96 feet long by 12 feet wide are being manufactured for the Navy.

. . . FIRST TO MAKE PORTABLE WALK-IN REFRIGERATORS!



low temperature refrigerators—150 cubic foot capacity—made for the Navy and for private contractors.

A WAR RECORD UNPARALLELED IN THE INDUSTRY

For over four years Weber's entire production facilities have been devoted to manufacturing sudden death for our enemies. Auxiliary Gas Tanks and Leading Edge Wing Assemblies for P-38's—Steel Life Rafts—Steering Wheels and Water Tight Doors for Landing Barges—Cowl Ventilators for Cargo Ships, and hundreds of other Weber products are sowing the seeds of Victory—On Land—On The Sea—And In The Air.

. . . FIRST TO FLY THE ARMY-NAVY "E" FLAG

One of the first 100 firms in the United States and *FIRST in the industry to fly the "E" Flag*. The addition of three stars is evidence of continued outstanding performance.

EST. WEBER 1898

WEBER QUALITY AND VALUE HAS BEEN RECOGNIZED FOR YEARS

Weber Commercial Refrigerators Display Cases and Quick Frozen Food Equipment are known from coast to coast for their quality, completeness, durability, efficient service and beautiful design and finish.

Weber Soda Fountains have always led the field. Ever since mechanical refrigeration was adopted the name Weber has been connected with every major development in the Soda Fountain industry.

WHEN PEACE COMES WEBER WILL BE FIRST IN THE INDUSTRY

The war has further advanced Weber's position. Additional plants, new equipment and more experience have been added to original research, engineering skill and unusual manufacturing facilities. Consequently, Weber Post-War products will be better designed, better engineered and better built. For greater quality, completeness, durability, efficiency and beauty of design, LOOK TO WEBER.

PLAN NOW TO SELL THE WEBER LINE INSTEAD OF SELLING AGAINST IT

Write today for full information concerning the Weber franchise. Territories for major distributors of Weber products are now under consideration. Exceptional profit possibilities await those who can qualify.

WEBER SHOWCASE & FIXTURE CO., INC.
5700 AVALON BOULEVARD, DEPT. "C"
LOS ANGELES, CALIFORNIA

Gentlemen:
Kindly send me complete information on the Weber Franchise.

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Company _____
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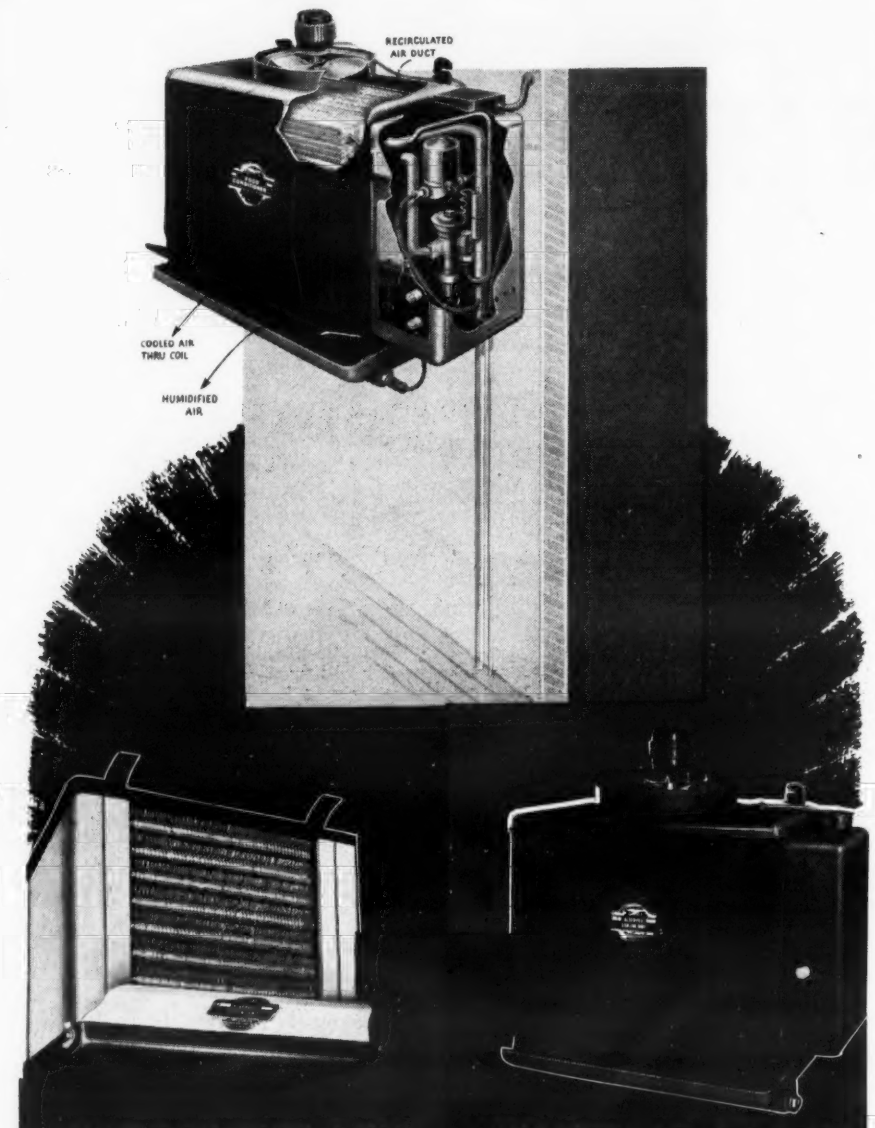
Address _____

WEBER SHOWCASE & FIXTURE CO.
5700 AVALON BOULEVARD
LOS ANGELES, CALIFORNIA

MAIL THIS COUPON NOW FOR COMPLETE INFORMATION

AMCOIL
FOOD CONDITIONER



AMCOIL Alservice Open Face Cooling Unit is designed for efficient cooling and serves as a general utility unit in preserving foods and other commodities where a forced draft cooling unit is required. Built to a modern, streamlined design, in attractive grey and black color scheme, it can produce temperatures down to 34° F.

AMCOIL Alservice Down Draft Cooling Unit is a new idea in refrigeration. It is a straight cooling unit that, should need for humidity control arise, by the addition of certain parts, the unit is converted into a cooling and high controlled humidity FOOD CONDITIONER with all the advantages of that equipment.

BUILT TO ADVANCE REFRIGERATION STANDARDS

Answering Industry's Demand

FOR A PRACTICAL, DUAL-PURPOSE UNIT

"Give us a compact food preserving unit that combines *high, controlled humidities* with *refrigeration*. AMCOIL SAYS "HERE IT IS" to such a demand with its new FOOD CONDITIONER, now available for immediate shipment under certain priority ratings.

This FOOD CONDITIONER is more than a unit cooler, combining as it does temperatures from 35° F. to 40° F., and high, controlled humidities up to 85%. This double accomplishment preserves foods *without* dehydration, and is made to be used in Walk-In boxes. It protects stored meats, fruits and vegetables, perishable foods, butter and cheese, eggs, flowers, bakers' and confectioners' products—and is practical for retarding dough.

ONE HUNDRED MILLION FOR REPLACEMENT

Government agencies estimate that this year will see sales of commercial refrigeration equipment for replacement reach a total over $100,000,000. AMCOIL engineered units may be purchased on rated orders of AA5, or better under L-38*. Inquire NOW how you can get your share of this business.

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25-27 LEXINGTON STREET • NEWARK 5, N. J.

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P. J. BURRILL, 800 North Clark Street, Chicago, Illinois
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*IMMEDIATE SHIPMENT NOW FROM LOCAL JOBBERS OR DIRECT FROM US

Inside Dope

By George F. Taubeneck

(Continued from Page 1, Column 1)

Texas is so big that—

'If you used the northern line of the Panhandle for a hinge, you'd put Brownsville so close to the Artic Circle that the Mexican hot tamale peddlers could swap their wares to the Eskimos for polar bear steaks;

"And having been told by J. Frank Dobie and other Texans that their dust storms are sometimes so violent that prairie dogs can be seen digging holes 40 feet high up in the air, but that when it finally does rain the catfish swim backward to keep the mud out of their eyes and considering that in Boot Hill cemetery there is a tombstone with this epitaph:

Ran for Sheriff, 1872
Ran for Sheriff, 1876
Buried, 1876

and considering that, according to an Associated Press from Austin, an old pal of ex-Governor Dan Moody slapped the latter so hard on the back, by way of greeting, that Moody gulped and swallowed the cigar he was smoking;

"Far be it from us to suggest that there was anything particularly strange about Texas having two rival, irreconsilable Democratic Conventions in session at the same time."

That Fascinating Field, Medical Refrigeration

Hospital refrigeration has long been a good field for the industry, inasmuch as hospitals have always needed elaborate installations for the preservation of foods. Air conditioning for operating rooms was just coming into vogue at the war's beginning and some rooms for convalescents were getting portable room coolers. Too, special refrigerators for the keeping of serums and pharmaceuticals were an absolute necessity.

All these add up to quite a sizeable market for equipment, and one which is far from saturated. But, in the vernacular, we "ain't seen nothin' yet." War-accelerated research is bringing to light the most exciting uses for refrigeration yet uncovered in any field of industry endeavor.

There's refrigerated anesthesia, for example—now becoming well advanced through widespread use in battlefield evacuation units. There's refrigerated fever control, and the use of refrigeration in the arresting of malignant cellular growth (which holds such high promise in the treatment of cancer and elephantiasis). Further uses, still in the hush-hush stage which characterizes all medical research until the justifiably cautious medicos feel *sure* they have something, may provide big and continuing new markets for new types of refrigeration equipment.

Refrigerated Surgery

Refrigeration is now being used all over the world by Army and Navy surgeons in countless operations—especially in surgery of the extremities. It has the following reasons-for-use:

(1) As a protoplasmic anesthetic
(2) As a means of abolishing shock
(3) As a means of eliminating the absorption of toxin from an infected limb
(4) As a preventative of bacterial infection

Previous to the use of this type of anesthesia, many lives were lost because it was impossible to operate in certain cases—diabetes, hardening of the arteries, and blood clots in the extremities.

Employment of the ordinary types of anesthesia in cases such as these often resulted in cases of shock and toxemia which proved fatal. What makes this new application so vital to the surgical world is that it apparently eliminates these two dangers.

Portable Units

Portable freezing units are now in use on every battlefield to combat shock and hemorrhage, and to prevent infection in cases where adequate surgical aid is delayed. These portable units have done so much to alleviate human suffering, and to advance the chances for recovery of the patient, that it is said every doctor in the armed forces has become a rabid enthusiast for their later use in peacetime.

A chilled arm or leg is painless. It cannot transmit sensory impulses. This means that refrigeration provides a perfect anesthetic, because no damaging current complications or after-effects need be risked by its use—in contrast to every other type of anesthesia known.

Refrigerated anesthesia has the additional advantages of arresting bacterial infection and absorbing toxemia. Refrigeration slows down metabolism, producing an anesthesia of protoplasm.

Cooling of limbs has extraordinary value in treating both diabetic and arteriosclerotic gangrene, in embolectomy in septic extremities, and in traumatized and infected parts. These are pretty big words, but they are VERY BIG to surgeons, and you can bank on it that they'll be eager for equipment which will do so much to help them on such cases.

Compound Fractures

Compound fractures comprise another field of surgery in which refrigeration may play a big part. It has been found that many amputations can be avoided if the limbs are held under precisely controlled temperature, thus checking bacterial infection without having deleterious effects on the tissue involved.

If worst comes to worst and amputation becomes necessary, most extraordinary results have been observed in the prevention of shock and the elimination of pain through refrigeration. Furthermore, loss of blood is inhibited, thus speeding recovery and preventing many deaths.

Use of refrigeration in tumor infection has astounded doctors who have seen it tried (and refrigeration is being tried on almost everything at "the front" these days). Many cases formerly given up as being hopeless have completely recovered.

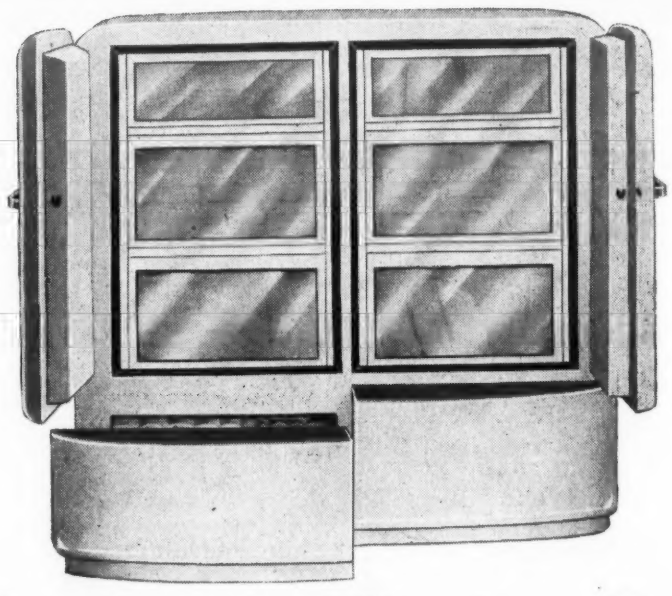
Typical Unit

A typical unit now in use on battlefields for this new form of drugless-shockless-bloodless-painless surgery measures 14 x 14 x 28 inches, weighing 200 pounds. It has a power take-off from the engine of the truck or ambulance in which it is installed; and it can be placed anywhere from the top to the running board of the vehicle.

On the battlefields this refrigeration unit saves scores of lives because of its peculiar function in avoiding the wounded part's need for oxygen. Before this unit came into use, the tourniquet applied by a first-aid man was released periodically so blood could flow back into the tissues, which needed occasional oxygen. This procedure permitted loss of vital blood and allowed poisons from the wound to flow back into the body through the veins.

Refrigerated cells, however, do not require oxygen. Hence the tourni-

(Concluded on Page 7, Column 1)



Territories Closing For

FREEZ-ALL
HOME FREEZERS

Distributors for Freez-All Home Freezers are now being franchised all over America. Freez-All features, beauty and plans are far advanced, and a careful reading of Freez-All literature will substantiate this statement. If you have not yet sent in a request for information on Freez-All, we invite you to do so. Prices, discounts, pictures, models will be sent immediately.

IN 50 years of manufacturing and merchandising, Portable Elevator Mfg. Co., Refrigeration Division, has never announced a product so enthusiastically received. Moderately sized announcements appearing in this publication brought many hundreds of inquiries from all over America. We answered with literature and other information, and second letters brought highly complimentary statements regarding FREEZ-ALL designs, features and plans. May we send this information to you?

FREEZ-ALL Home Freezers and PELCO Beverage Coolers are manufactured by Refrigeration Division, Portable Elevator Mfg. Co., Dept. 284, Bloomington, Illinois.

Inside Dope

By George F. Taubeneck

(Concluded from Page 6, Column 5)

quets need not be loosened if the wounded member is refrigerated. Thus blood is saved and poisons blocked off. When the casualties are transported back to base hospitals with refrigerated aid, they arrive in excellent shape. It should be noted that freezing is never employed under such circumstances. Temperature called for is 40° F.

Back at the base hospital, if surgery is required, refrigeration again becomes important. In addition to preventing poisonous absorptions into the tissues, it checks blood oozings and absolutely stops bacterial multiplication. Hundreds of casualties with badly crushed limbs—which would have had to be amputated had refrigeration not been available—have been saved through the judicious application of low temperatures.

In the control of cancer, not much can be said yet beyond the fact that refrigeration is probably the most promising treatment found in the last 20 years. One thing you can say: it alleviates the pain. Blankets which contain refrigerated coils are used in this process, and they definitely bring relief in every case. Whether they will cure or not remains to be seen.

Psychoneurosthenia

Perhaps the most numerous category of war casualties is that of psychopathology. In the last war they called it "shell shock." Now they term it PN (psychoneurosthenia). It's a shattering result of warfare, shuddering to consider. The symptoms and the treatments had perhaps better be left for the medical journals to describe.

Suffice it to say that *counter-shock* is the most successful treatment. There are many manifestations of counter-shock, of which drugs have hitherto been the most tolerable. But drugs can be damaging, and even death-dealing. Refrigerated shock, on the other hand, leaves no damaging effects at all. It provides the most acceptable—morally, physically, and aesthetically—form of counter-shock yet discovered. This particular field may provide the refrigeration industry with its most potentially useful applications in the field of relieving human suffering.

Severe burn cases offer another new application for refrigeration, and a most promisingly useful one. When burns are so bad and so extensive that they won't heal without skin-grafting, large areas of fresh skin must be sliced away to be applied to the burn site. The surgeon, in such cases, slices a thin layer of skin from the thigh or stomach, and places it upon the wound, where it grows and protects during growth.

This gruesome operation was formerly painful in the extreme, because the surgeon's knife severed numberless highly sensitive nerve ends. Refrigeration applied to the surgery areas completely eliminates pain, if applied long enough. No general anesthetic need be used if refrigeration is present.

Results of this new technique are amazing. Not only is pain entirely eliminated, but healing is tremendously promoted and speeded. Shock is the most serious factor in burns, and refrigeration eliminates shock. Bacterial growth and pain, the two most desperate secondary factors, are eliminated also.

Of all these refrigerated hospital applications, perhaps the most intriguing is the freezing of spermatazoa. This has been done successfully in the preservation of bovine semen for artificial insemination, and now they have done it for human beings. Eugenists see in this development the most remarkable consequences for the human race they have ever encountered. It now becomes possible to store human inheritance factors for generations!

Field Treatment

Back to that potent field of refrigerated anesthesia, the Army doctors have found that refrigerated treatment en route to base hospitals far behind the lines—either by means of trucks or airplanes—is by far the most satisfactory method both from the standpoint of the patient and the surgeon. This has turned out to be especially true in hot climates, such as found in the Pacific areas.

In these situations both surgeons and nurses have become convinced that refrigeration is the most sensible and successful form of anesthesia. After the war these "convinced" operatives will provide a most sensitive market.

Beyond the field of battle casualties, surgeons at home are finding that refrigerated anesthesia is almost the only acceptable method for amputation in cases of diabetic gangrene. Victims of this disease are usually advanced in age, and thus not good operative risks where old-fashioned anesthesia is involved. Those few fortunate surgeons on the home-front who have been foresighted enough to have provided refrigerated anesthesia equipment in their hospitals before the war, have found that their casualties in these cases have been almost erased.

As a simple, dramatic sample of the inhibiting powers of refrigeration on bodily functions, one surgeon discovered that a man whose body is being refrigerated grows a beard only one-fourth as fast as a man at normal temperature. This fact becomes more revealing when you know that beard growth is the bodily function least susceptible to inhibition—it proceeds at normal rate even after death.

Serum Protection

Serum refrigeration is another field which calls for large amounts of refrigeration. Individual bottles of serum must often be held at low temperatures for months. A pool of serum consists of eight individual interceptions from 30 or more individuals. Sample holdings may include 2,000 bottles of frozen serum. All such samples are precious and irreplaceable. They MUST be refrigerated properly.

Hospital laboratories also must have air conditioned rooms for the care and observation of animals on whom experimental work is being carried out on the control of infantile paralysis, influenza, and other virus diseases. All such research adopts constant temperature as a control factor.

War gives birth to freakish clinical cases. Take Immersion Foot and Airman's Hand. Both types of chill are given the cold cure treatment.

Immersion foot is a first cousin to the old trench foot of World War I, and is a case of bloating caused by confinement for long hours in open lifeboats with the feet soaked in cold sea water. The airman's affliction comes from exposure to cold temperatures at high altitude. His face may be affected as well as his hands.

The treatment consists of sprinkling open spots with sulfanilamide, keeping the injured flesh cold and then gradually raising the temperature to normal.

A refrigerating unit devised by the Canadians is built so that the patient's legs are fitted into the cold box while the rest of his body is kept warm. In England, doctors keep the injured parts in cold water.

Advanced cases do not always react favorably to the cold cure; but amputations, compared to the numbers in World War I, are greatly reduced.

Royal Canadian Navy surgeons have done an excellent job as shown by their report on 150 North Atlantic survivors exposed for many days. Out of this number there were only seven amputations.

Blood Plasma

Articles in newspapers and popular magazines have made familiar to all the processes by which donor's blood becomes powdered plasma for use in saving the lives of our fighting men. Refrigeration is required in every step of the process; in storing the blood in the receiving station, in the centrifuging process by which the plasma is separated out, in shipping the plasma, in powdering it.

After being tested for purity, blood samples are converted to blood plasma and centrifuged until the clear straw-colored plasma remains on top. The plasma is then frozen at -22° to -40° F. and subjected to vacuum treatment simultaneously until rendered absolutely moisture free. In this dry concentrated condition, it can be handled readily.

Fortunately, blood plasma storage units are now becoming fairly well standardized. Usually they require a ¾ or 1 hp. compressor (although the big centrifuging stations will, of course, use greater refrigeration capacity). Shell-freezing cabinets, as developed by Dr. Max Strumia, are also entering the picture as a simple alternative method to centrifuging. These require a 2-hp. compressor.

Refrigeration equipment is being designed for preservation of whole blood, including some refrigerated mobile equipment so that blood can be taken quickly from place to place as needed. Plasma, although extremely important in the saving of life, does not always provide a complete substitute for whole blood. Refrigerated whole blood will be on hand for use when plasma alone will not suffice.

Both plasma and whole blood are used extensively at present in the American hospital units in Great Britain to treat men wounded in air battles and in training for the ground invasion.

Use of plasma in warfare permits surgeons "to get their hands on a wounded man." Easily administered at the front where the soldier is wounded, plasma effectively relieves traumatic shock, which formerly killed thousands of soldiers before medical attention was available.

Research Foundation

Some members of the industry have been doing quite a bit of cerebrating and cogitating about ways and means of doing some cooperative promotion. Their idea; by promoting greater use of refrigeration, they can sell more parts, supplies, and equipment.

As a vehicle for such cooperative endeavor, some men have suggested the establishment of a Refrigeration Research Foundation, devoted to new applications for refrigeration. The American Society of Refrigerating Engineers also has done thinking along this line recently.

New studies in the use of refrigeration to allay human suffering—through refrigerated anesthesia, cancer control, hemorrhage control, and shock treatment for psychoneuroses—have been most promising. What a great contribution to humanity (as well as to the creation of new markets for refrigeration) might be made by the establishment of a Research Foundation just for this purpose alone!

Most of us have friends and relatives in the armed services who may receive direct and all-important benefits from such research. A program should be instituted without delay.

AMANA
"Walk In"
COOLERS
AVAILABLE NOW TO BUYERS WITH PRIORITY . . . in any size or type. Amana's long experience in building "Walk-In" Coolers is assurance of efficiency and long service. Insulation of latest models is of corkboard or "Fiberglas" insuring extra economy and top cooling ability.
REFRIGERATION DIVISION
AMANA SOCIETY
AMANA, IOWA
ARMY E NAVY
Awarded the Army-Navy "E" with White Star for continuance of excellence in production of war materials.

Will It Help Keep Your Post-War Customers from Getting Hot Under the Collar?

The same Worthington skills that helped design refrigeration equipment for high-octane aviation fuel . . . or helped simulate stratospheric conditions for engine test cells . . . will help *you* obtain the most efficient, trouble-free air conditioning equipment in the competitive days to come.

Why not find out – today – how *many* of the essential parts of an air conditioning system Worthington will be able to supply. In many cases, complete unit responsibility has contributed greatly to economical maintenance and dependable, long-lived performance.

Investigate, also, the many historic air conditioning installations, including the New York Stock Exchange in 1904, which have built up the backlog of Worthington experience on which you – your clients and customers – can rely. Worthington Pump and Machinery Corporation, Harrison, N. J. District Offices and representatives in principal cities.

WORTHINGTON BEHIND THE NAME WORTHINGTON

AR4-9

Refrigeration · Air Conditioning

Birdseye Executive Sees Broad Changes In Retail Store Frozen Food Cabinets

'Visibility and Accessibility' Should Be Prime Features of Postwar Cabinets

("Declaring that the low temperature cabinets from which frozen foods are now dispensed in retail food store are 'inefficient and costly,' G. L. Mentley, vice president of Birdseye-Snider, Inc., predicted that they would be replaced by modern units that provide maximum food protection, visibility, and accessibility, in a talk before the New York State Food Merchants Association."—From the Aug. 21 Bulletin Edition of AIR CONDITIONING & REFRIGERATION NEWS.)

For those who want to know more of what the executive of the nation's No. 1 frozen food producer said on this subject, the NEWS publishes the following excerpts from Mr. Mentley's talk.

"Right now, of course, frosted foods are decidedly good merchandise," Mr. Mentley pointed out. "They are reasonably priced. They have been treated most liberally with regard to ration point values.

"The important question is: What about their permanent value for the retailer? Why should you handle them, get behind their sale, exert yourselves to perform the functions that a retailer performs for a commodity in which he has confidence?

"Real commercial development of the frosted foods industry was undertaken during those depression years of the early '30's. Consumer and grocer reaction to foods processed by quick freezing was almost antagonistic. Distribution facilities were both limited and costly.

"The low temperature cabinet, now so familiar in thousands of retail grocery stores throughout the country, was inefficient and costly. This cabinet required a large capital outlay on the part of the grocer.

"It was difficult for many grocers, during those depression years, to recognize the potentialities of quick frozen foods. However, continuous educational work, sales effort, publicity, intensive store promotions and advertising, both local and national, over this period of time has had the cumulative effect of changing consumer and grocer attitudes. Distribution facilities have been developed.

"Low temperature storage equipment, due to demand and availability, is now reasonably priced.

CABINET OF THE FUTURE

"The cabinet of the future, however, will be one that provides visibility and accessibility, one that will permit the customer to see the packages of products quickly, one that she can get at conveniently, to find the packages she wants, be encouraged to examine others, and to help herself.

"Regardless of whether the store is a service type, or a semi-service, or self-service type, this form of unit will undoubtedly make larger sales possible.

WHAT OPEN DISPLAY MEANS

"Where it has been tried today, with present type storage cases but with lids off and product neatly arranged, sales have ranged from $125 per week to as high as $800.

"Finding the right location for the cabinet is something each retailer must figure out; it will vary more or less according to the store. A highly active or traffic spot is not necessarily the place for the cabinet. Traffic may be so heavy that people who want to get other products within that traffic region may not take the time to look over the frosted foods.

LOCATING THE CABINET

"We have found in the past few years that there are three rather satisfactory locations—near the fresh produce department, near the delicatessen section, or in an island display adjacent to either the meat department or some semi-active area.

"It is best not to locate the cabinet near the cashier's desk. When a customer reaches that point her purchasing in the store has usually been completed and suggestions of other products to be bought rarely enter her mind.

"We're all in business for one big reason. That reason is **profit**. And the sale of quick frozen foods can return a good continuous profit to you all the year round. Here is one line of perishable foods that have a known factor of cost—a known factor of profit margin. There is no waste—no hidden losses. Thousands of successful grocers around the country have proven that quick frozen foods when coolly appraised have a unique set of advantages for the retailer.

BOOM ONLY AWAITS UNITS

"Today the acceptance for quick frozen foods is a provable fact, and only the lack of mass production of low temperature cabinets and product is a limiting factor in the selling of quick-frozen products.

"While the war period has imposed many deterring factors in the normal development of the quick frozen foods business, it has also provided many assets. With the diversion of canned foods from normal civilian channels into army use, many new consumers tried quick frozen foods.

"The inclusion of quick frozen foods, along with canned foods, in OPA price regulations gave the quick frozen foods industry a greater standing in the nation's food picture. Rationing focused consumer and grocer attention on quick frozen foods and accelerated the understanding of comparative values. War time industries provided new earning power for many segments of the population. These people used quick frozen foods for the first time and have found them good and economical, so that a considerable part of this mass market will continue their use in the postwar era.

"We in the industry are looking at the future enthusiastically—not so much from the standpoint of just increasing production of the commodity items such as peas, corn, limas, spinach, and strawberries—which we will always have—but the combinations of items research is developing which will lend themselves to more complete meal planning.

WARNING ON COOKED FOODS

"The cooked food field is being approached rather carefully, searching out only those combinations which will give the customer a distinct quality and taste value over any other type.

"One can go off the deep end in his imagination of cooked food possibilities, but the criteria we feel which will determine the practicability of any one of these new items will be:

"Is it of better quality and taste than any similar product made at home or on the market?

"Does it represent a value to the consumer?"

"Can it be sold at a popular price with adequate margins of profit for all concerned in the scheme of distribution?

"There will be a future for some cooked foods that answer this criteria—many less than the day-dreamers think because new product hysteria will bring out many 'bloomers.' There will be great advances in fruit preservation not now released—but ready, when the wartime controls are relaxed and additional equipment is available.

"Innovations resulting in much better packaging, storing, delivering, and even such items as cheap customers' insulated bags to carry their frosted food purchase home, ready for release after the war. All of the foregoing point to a consumer volume and service that fairly cry out to the retailer to get into the spirit of aggressive frosted food selling now—and he might do one thing additional: make a point of trying all the frosted foods he offers, in his own home."

wanted

MEN WITH THE DESIRE AND ABILITY TO MAKE A FORTUNE

--FROM THE VAST, PENT-UP BUYING POWER OF THE FOOD INDUSTRY

FRIEDRICH -- one of the oldest and most successful commercial refrigerator manufacturers--has a few choice territories open in several states including New York, Massachusetts, Michigan, Minnesota, Ohio, Kansas, Maine, Colorado, Washington (and many foreign countries), for men qualified to present . . . . . .

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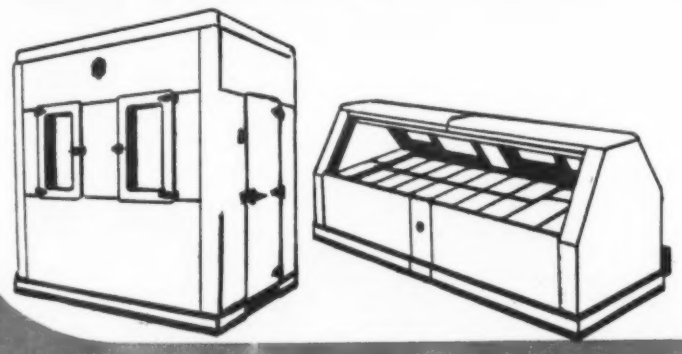

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'Not True' Says Industrial Designer of Rumor 1942 Models Only Will Appear

New Companies Will Come Out With '1945 Lines' And Force Old Firms To Follow, Says Lippincott

NEW YORK CITY—"All this talk about immediate postwar production of home appliances being limited to 1942 models simply isn't true," J. Gordon Lippincott, industrial designer, asserted in an interview in the Aug. 17 "New York Times."

Asked how soon we will get new products he said:

"Far sooner than either industry or the government is letting on today."

Outlining a timetable for the possible production of consumer goods, Mr. Lippincott predicted that if Germany folds up by November, electric irons, toasters, and similar small appliances and housewares will be available in generous quantities by February and March. Larger appliances such as washing machines, refrigerators, vacuum cleaners, lawn mowers, and sewing machines, he prophesied, will be available in limited quantities by April and May, and in appreciable quantity by fall.

DOUBTS LONG TOOLING DELAY

Denying that the process of retooling will take as long as predicted—except in the case of automobiles—the designer declared that many of these home appliances will be brand new "1945" designs.

"Many of our clients," he said, "have new and greatly improved postwar products, entirely retooled and ready for mass production as soon as the go ahead is given. As soon as any new and improved 1945 products are on the market it will break competition wide open. The consumer knows that the war has made all 1942 products obsolete."

The designer had based this forecast, he said, on the capacity for American industry to produce. Pointing out that we have virtually doubled our industrial output during the war—even without the help of the 10,000,000 men and women in the armed forces—he emphasized that industry today is in better shape than ever before in our history.

"Our plants have better machine tools," he said, "better paint on the walls, fewer leaks in the roof."

CAN SUPPLY CONSUMERS

Even if Japan holds out for more than a year after Germany is defeated, he believes we can satisfy substantially all our consumer requirements along with the necessary war production. Referring to the recent forecast by Donald M. Nelson, chief of the War Production Board, of a 30% consumer production as soon as Germany folds up, Mr. Lippincott asserted:

"This 30% is a compromise with the Army. There is little doubt that American industry could easily produce 60% of the needed consumer goods and still win the war against Japan."

The recent emphasis on the return of 1942 models, the designer explained, grew out of the wave of consumer optimism provoked by a flood of postwar advertisements illustrating dream automobiles, homes and appliances. Both government and industry wanted to stop that trend, he said.

WHY 1942 MODELS?

"The government was interested in production and did not want the consumer mind to wander from that focal point," he said. "Industry would prefer to put the 1942 product back on the market as soon as the war is over because it is easier to do so."

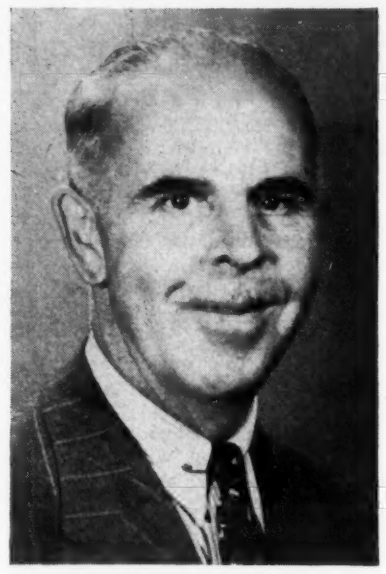
On the other hand, he ventured, there are the thousands of smaller concerns that mushroomed overnight from garages or machine shops to full-fledged war plants. They will be entering the consumer field, he predicted, and these new companies in particular will come out immediately with "1945 products." The "old line" companies will have to follow suit, Mr. Lippincott concluded, or else be put out of business.

Johns Heads Westinghouse Salt Lake City Office

SALT LAKE CITY — Stanley M. Johns has been named manager of the Salt Lake City office of the Westinghouse Electric & Mfg. Co., according to Chas. A. Dostal, vice president in charge of the company's Pacific Coast District.

Mr. Johns succeeds Frank E. Bodine as Salt Lake City manager. Mr. Bodine will be in charge of the San Francisco territory.

Forms Own Company



CLARK BRIDGMAN

Who has formed the Clark Bridgman Co. to handle the sale of Bush Mfg. Co. products in the Midwest.

Servel Factory to Close 10 Days for Inventory

EVANSVILLE, Ind. — Factory inventory will force a 10-day shutdown beginning Sept. 20 of Servel, Inc., Electric Refrigeration and Air Conditioning Division. Customers are urged to anticipate their requirements and place orders early for delivery before the shutdown.

Rationing Removed On Certain Stoves

WASHINGTON, D. C. — Rationing restrictions were removed from coal-wood laundry stoves and gas ranges with non-metallic outside back or side panels on Tuesday, Aug. 15, the Office of Price Administration has announced.

OPA explained that this step was taken with the concurrence of the Office of Civilian Requirements of the War Production Board, which has the responsibility of determining what stoves should be rationed. Removal of the laundry stoves from rationing is possible because the supply of these stoves is sufficient to meet demand, OPA said.

Gas ranges with non-metallic outside back or side panels are being removed from rationing to prevent them from clogging dealers' and distributors' stocks, as models with metal backs and panels are now available.

Laundry stoves are small, flat-top units usually made of cast iron. They are used in many homes for laundry purposes and for auxiliary heating.

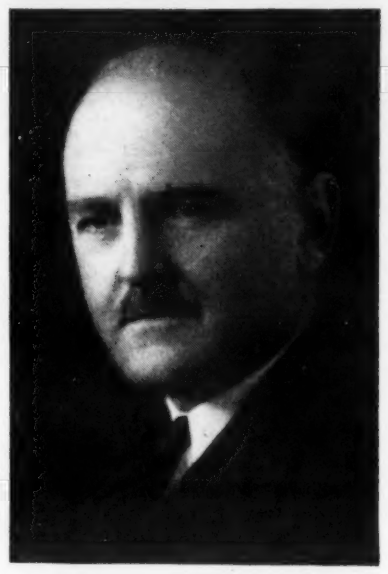
The gas stoves being made ration free are those in which asbestos board, fibre board, or pressed board was substituted for steel in the outside back or side panels. These stoves are easily recognized because this substitute material is distinctive from the porcelain finish normally employed.

All stove dealers and distributors must report their inventories of each of these two kinds of stoves not later than Aug. 25. They then may receive stove certificates with which they can obtain rationed stoves of the same stove type.

If the dealer currently owes certificates to his board, the amount of the debt will be subtracted before certificates are issued.

Dealers must return certificates to persons who have ordered either of the two kinds of stoves if the stoves have not been shipped or transferred on or before the last day such stoves are rationed.

Philco Operations Chief



WILLIAM BALDERSTON

Formerly vice president in charge of the commercial division, has been named vice president in charge of operations of Philco Corp.

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ADVANTAGES:

- Large water storage available to meet peak loads or emergency requirements—in excess of condensing unit hourly capacity.
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ICE-X
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U. S. Army's 2½-ton amphibious DUKW, inevitably GI-christened the "duck," is a truck that swims—a characteristic which requires a full measure of All-Purpose Engineering.
Our army's sea-going truck, the "duck," is All-Purpose Engineered for war. It is built in simplest form for the greatest possible range of applications and/or conditions.
For a peacetime example of All-Purpose Engineering for your refrigeration requirements—whatever they happen to be—look to Universal Cooler. Simplified, precision-built refrigerating units, with new standards of efficiency and economical operation are already field-tested and waiting to contribute to your postwar product. On design, research and product-testing problems, say . . .
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- Exclusive Features—
  1. Flexible Synthetic Rubber Bellows Head slides freely—provides automatic compensation for washer wear, shaft vibration and end play through wide range.
  2. Protecting Ferrule prevents Bellows Head from touching shaft. Assures free sliding at all times.
  3. Sealing washer has positive drive through metal parts.
  4. A Complete Unit, ready for use. Sealing faces factory-lapped.
- This Precision-Built Shaft Seal is already thoroughly proven on many exacting services.

Design and Development Engineers—Send for Illustrated Bulletin

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Advocates of 'Complete Home' Claim It Will Benefit Builders, Buyers, Dealers

NEW YORK CITY—Just exactly what is the "complete home" program which is being so actively promoted by *Architectural Forum* magazine and certain building interests, and just how does it affect the electrical appliance dealer?

The *Architectural Forum* group says that their program, which embraces the idea of including the financing of the major appliances under a single realty mortgage (greatly helped by the FHA policy of the last year which permits this in FHA financing), will result in a better deal for the new home buyer who won't have plunked all his money into the house itself, and then found himself unable to buy any appliances.

Some opposition to the program has been voiced, in particular by the National Retail Furniture Association, which sees danger of a public demand for "25 year terms" on all household items.

Proponents of the plan point out that the program is neither new nor revolutionary. Household equipment, along with 71 other types of "easily removable real estate items" such as stokers, water heaters, and oil burners, have in the past been financed under the realty mortgage.

They point out that in Washington, D. C., it has been common practice for years to include the financing of refrigerators and ranges in mortgages on homes offered for sale, and that builders on Long Island have always included ranges in their houses.

A further point they make is the fact that the financing of this equipment under the realty mortgage has not been confined to FHA-licensed institutions. It has also been common practice with certain savings and loan associations.

The following is the kind of arguments that the *Architectural Forum* group is advancing to appliance dealers on the plan:

Before the war, most builders were offering homes that were merely a stripped-down shell (that is, without refrigerators, ranges, washers, etc.). The essential "operating equipment" that the new home owner needed could be obtained only when he could afford to take on another financing program, of the type of "short-term, high-priced payments."

'BARS' ARE VANQUISHED

The two biggest bars to the "complete home" idea were the popularly held beliefs that—

1. Home appliances couldn't be considered a part of realty because they are not permanently affixed to the structure.

2. That this equipment cannot be financed under the long-term mortgage because it will wear out before the rest of the house.

But a new and much more liberal position has been taken by the FHA, the government agency which insures private mortgage funds. To date, 42 state FHA offices have declared ranges eligible for insurance under the realty mortgage; 41 states have okayed refrigerators; 40 have approved dishwashers; garbage disposals won an okay in 34; and automatic washers in 18 states.

MORE DEVELOPMENTS LISTED

Other significant developments along this line of financing are:

A proposal up for adoption by the United States Savings and Loan League which would establish a precedent for financing the purchase of replacement equipment under the home mortgage.

A recent FHA Title VI amendment makes it possible, on privately financed war housing, to add and finance home equipment by increasing the amount of the mortgage up to the amount of the original insured loan.

A possibility that the "G.I. Bill of Rights" provisions for housing loans to veterans will permit financing of the "complete home" and hence, appliances.

The FHA is apparently making some moves to help the builder who will put quality equipment in the "complete homes." One way to do this could be through efforts of the Underwriting Division to attempt to reflect accurately in its evaluation superior equipment that meets more than minimum standards and which gives longer service before replacement.

Another means is through a fairly recent change in insuring mortgages in multiples of $50. Originally, FHA insured mortgages only in multiples of $100. A property that merited a mortgage of $4,590 could only be insured for $4,500. Consequently, a builder who installed quality equipment costing $90 more than his competitor's, might receive a loan no larger. This meant the down payment had to be 10%, plus an additional $90. As a result, builders often shelved the costlier equipment.

The argument is advanced that it will pay builders to use quality equipment in the future not only for the above reasons, but also because in a competitive market, housing featuring nationally advertised products will have more consumer appeal.

Editor's Note: A campaign has been launched by an influential group in the building industry to promote the idea of builders equipping and selling "complete homes" when peace comes. By a "complete home" is meant one that will be fitted out with refrigerator, range, home laundry equipment, and possibly dishwasher and garbage disposal.

This campaign has considerable significance for the appliance dealer. Will it help boom his sales, or will these sales direct to the builder by-pass him? In this article, the group fostering the campaign—the editors of *Architectural Forum* and some builders—gives the reasons why they think such a program would benefit the builder, the buyer, and the appliance dealer.

Dealers and other readers of the NEWS may have opinions for or against the "complete home" idea. Send them along while there's still time to debate the idea.

Questions and Answers

FOR THE BUILDER

1. If I offer my houses fully equipped and my competitor offers a stripped-down house, won't he be able to outsell me on a price basis?

A prospective buyer can be shown that if a refrigerator, range, etc., have to be acquired separately under a series of short-term, relatively high-priced payments, the fixed monthly charges will be considerably heavier during his first years as an owner than under the "complete home" program. An example is given as follows:

Comparative Down Payments and Monthly Payments of "Chassis" House and Complete House

$4,500 "Chassis" house sold under FHA-insured 25-year monthly payment plan		$5,050 Complete House including range, refrigerator, automatic laundry (retail price 1940—$455)	
Range, refrigerator, automatic laundry acquired separately (retail price 1940—$455)			
Down Payment House	$500.00		
Down Payment Equipment	45.50		
Total Down Payment	$545.50	Down Payment	$555.00 $555.00
Approximate Monthly Payment House—including interest, principal, FHA insurance, taxes, fire insurance	$ 35.00		$ 37.38
Monthly payment on equipment for 30 months including $64 finance charges	15.80		
Total Monthly Payment	$ 50.80		$ 37.38

(Concluded on Page 11, Column 1)

BETTER INSULATION—FAST
WITH PNEU-PRO FIBRE

Here is a NEW fibre especially designed with patented qualities to do an amazing job of insulating refrigerator cabinets and doors. In seconds, this highly efficient, odorless fibre is blown into every corner and crevice—there are no voids—no slabs or filler strips are required. All surfaces are protected by one uniform mat of highest efficiency insulation.

The Balsam-Wool Pneumatic System with this special asphalt-treated fibre offers the ultimate in refrigerator insulation—low K value—a uniform unbroken insulating mat—fast, positive application from one inventory.

Here is a special scientific process whose efficiency has been proved on actual production lines—a postwar development in economy that is available today. For full information—write: Wood Conversion Company, Dept. 194-9, First National Bank Bldg., St. Paul, Minnesota.

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Please give me the facts about the Pneumatic System with PNEU-PRO FIBRE for refrigerator insulation.
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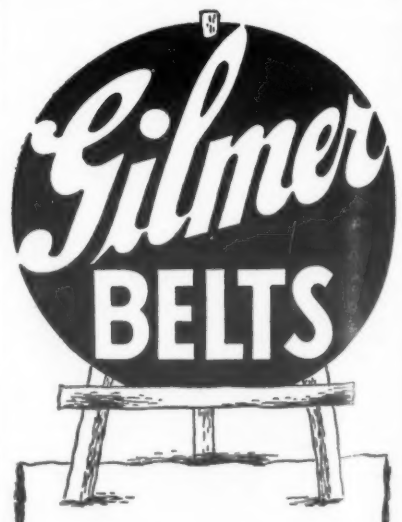
Balsam-Wool
PNEUMATIC SYSTEM WITH PATENTED PNEU-PRO FIBRE

Gilmer BELTS



There's plenty of profitable business to be had in the sale of replacement belts for air conditioning and refrigeration units.

Dealers everywhere are ringing up tidy profits by supplying rugged, long-lived, efficient Gilmer Belts. Gilmers are built to give the best service to the user and are always goodwill builders for you. Order through your jobber today.

•

L. H. GILMER COMPANY
Tacony, Phila. 35, Pa.

Questions-and-Answers For the Dealer on 'Complete Home' Plan

(Concluded from Page 10, Column 5)

2. Why should I become an equipment salesman?

People want to buy homes to live in, rather than piecemeal lots of land, roofs, and various pieces of operating equipment. The "complete home" will give the builder a shot at the mass market which the automobile dealer, for example, has sold in good times and bad because he had a completely equipped, ready-to-operate vehicle at a reasonable price, and readily financed.

3 Will the installation of refrigerators, ranges, washers, etc., needlessly complicate my home sales?

No. Every builder knows that an attractive kitchen is the greatest drawing card in the new home, and nationally advertised brands will greatly strengthen the customer's will to buy.

4. Will my salesmen require special training to demonstrate kitchen and laundry equipment?

No more than it does to show a furnace or water heater. Besides, help in demonstrations may be obtained from the dealer or distributor who sold you the equipment.

5. Suppose the prospect has his own range and refrigerator?

If your house is equipped with the latest models of time and labor-saving appliances, the job of selling the prospect on the newer equipment should be in the main accomplished, and little effort should be needed to get him to sell or trade in his old appliances before moving. If the prospect's equipment is taken in on a trade-in basis, the dealer or distributor who sold you the equipment will act as a clearing house. Another consideration here is that when the war is over, most appliances will be at least six years old.

Questions and Answers

FOR THE APPLIANCE DEALER

1. How will the "complete home program" affect my business?

It should greatly stimulate sales because the more household equipment that can be financed under the long-term realty mortgage, the more money can be safely spent on other essential goods you sell.

After the war, competition for the consumer dollar is going to be very keen. In the middle '30's, 85% of America's families had incomes of less than $3,000 per year. Yet they bought three-fourths of all consumer products, durable and non-durable. In 1943, despite swollen payrolls, wartime labor rates, etc., 74.2% of the country's families still made less than $3,000 per year.

WHO WILL MAKE THE SALE

2. Won't the builder get all the new house business?

No. Before the war, 40% of the new homes were owner built. If the predicted home market materializes, this would result in an annual market of 400,000 units. Equipment going into these homes would be selected and purchased by owners. Also, before the war 95% of the country's builders erected less than 10 houses a year, and builders in this group would be logical prospects for the dealer to sell, although they might ask for some price concession. It is also suggested that in return for leads on people who plan to buy or build homes, builders may permit appliance salesmen to be stationed in the kitchen of model homes.

3. Who will get the business of the "merchant" or big-scale builders?

It is likely that this type of builder will *not* be a prospect for the dealer, since he will probably buy on a discount basis from distributors much the same as apartment houses bought refrigerators from distributors. The argument is advanced that if a builder installs equipment in a house and then sells the house containing the equipment to a buyer, he performs much the same retail selling function as a dealer and is therefore entitled to compensation on virtually the same basis as the dealer.

CAN IT HELP THE DEALER?

4. If this long-term mortgage financing were not available, wouldn't everyone have to buy household equipment from the dealer?

It is the belief of the *Architectural Forum* group that until the public is offered a "complete" home financed under a single, long-term mortgage, a greatly sustained home market will never be realized.

Surveys show that the big stimulant to appliances and home furnishing sales is not wear and tear or obsolescence, but *movement.* The greatest stimulant to movement is new house construction. Mrs. Jones moving into a 1946 model house will make Mr. Jones buy her a 1946 model range, refrigerator, etc., to replace their old equipment. Mrs. Smith moving into the house Mr. Jones vacated won't bring her old equipment into her newly redecorated home.

DOESN'T IT STRETCH TERMS?

5. Will this program affect the credit stretch of replacement appliance sales?

Not necessarily. When lighting fixtures, linoleum, or water heaters are installed in new homes, these items are financed on a 20 to 25-year basis. On replacement, they are usually bought for cash or on credit terms up to three years. The point is, people have not clamored for a finance stretch past three years because linoleum was originally financed as part of the house under a 25-year mortgage. It is possible that, in the future, replacement sales to home owners, if part of a general modernization program, may be financed under the realty mortgage.

6. Will I be at a disadvantage if my manufacturing outlet makes only a range or a refrigerator?

Possibly, but not necessarily. While one builder might be inclined to favor the complete line producer, another might favor selection from competitive lines.

7. Will the home owner be paying for equipment after it is worn out and been replaced?

While this is theoretically true, it is equally true of the furnace, the water heater, roof, sidewalk, and paint that wears out and requires replacement before the mortgage is paid off.

Bilsborough To Head Smith Stoker Sales

MILWAUKEE—H. L. Bilsborough, veteran in the stoker sales field, has been appointed manager of stoker sales for the A. O. Smith Corp. here.

Mr. Bilsborough entered the stoker industry in 1928 with Iron Fireman Mfg. Co., advancing to district representative. He became sales manager of the stoker division of Fairbanks, Morse & Co. in 1934, and was named division manager in 1938.

Stevens Heads Western Service For Utility

ASHEVILLE, N. C.—Sam Stevens has been appointed division service supervisor of the Western Division of the Carolina Power & Light Co., announces J. S. Bourne, manager of the distribution and service department. Mr. Stevens had been in the service department of the utility here for several years and recently served as instructor in the local refrigeration service training school conducted in conjunction with the national program.

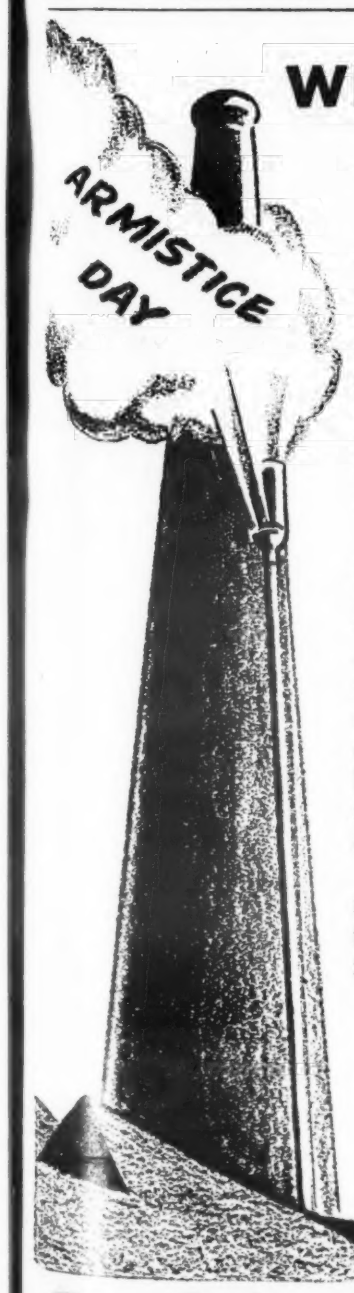
Converse Named To Electromaster Post

E. W. CONVERSE

* * *

DETROIT — E. Wayne Converse has been appointed advertising manager of Electromaster, Inc., producer of domestic and heavy-duty electric ranges and water heaters, in connection with the company's plans for increased advertising and sales promotion activities after the war, announces Gerald Hulett, vice president.

Previously associated with daily newspapers, Mr. Converse had conducted his own advertising and publishing business for several years before the war.



WE ARE READY!
ARE YOU?

YOU HAVE had your warning. The halls of Congress and political conventions echo and re-echo with the command, "Get ready for the peace." W.P.B. urges, "Build your postwar samples." Statesmen, politicians, financiers and executives the world over are talking "peacetime economy." Even the typewriter strategists have joined the cry, "Get ready for peace."

What are we doing about it? At Tecumseh, postwar models are well beyond the "layout" stage and some "samples" have been built. These units are designed on the same sound engineering principles that established Chieftain's leadership. Yet, they mark real progress, for Chieftain will supply a complete line of commercial hermetics, with greater flexibility of application and added safeguards for trouble-free performance, not the same old product in a new dress.

This message is directed to the progressive manufacturer of refrigeration equipment who is doing something about his company's future.

WE ARE READY TO TALK:
ARE YOU?

WRITE OR WIRE OUR SALES DEPARTMENT

Chieftain TECUMSEH PRODUCTS CO.
TECUMSEH • MICHIGAN

CHAIN television is here! With the recent dedication of the new Philco Relay Transmitter at Mt. Rose, N. J., the first television network is in actual operation today, linking Philadelphia, New York and Schenectady. Now Philadelphians enjoy clear reception of programs from New York through WPTZ, their local Philco television station. Thus a technique is being developed that will make television nationwide and will enable millions of Americans to witness events that take place thousands of miles away! And Philco is in the forefront of developments that will bring television to your community.

HOW PHILCO RESEARCH SPEEDS THE SPREAD OF TELEVISION

This first television network is an example of how Philco research is working to establish transmission principles which can extend chain television broadcasting from coast to coast. At the same time, Philco research is improving the clarity, sharpness and detail of the television picture . . . so that future television sets will have the greatest possible sales appeal. Thus in two ways . . . by helping to broaden the market for television, and by designing a more saleable product for that market . . . Philco leads toward the goal of television as tomorrow's "billion dollar industry" . . . bringing television closer to your community *and* your business.

Radio Hall of Fame Orchestra and Chorus
Tune in Sundays, 6 P.M., E.W.T., Blue Network

★

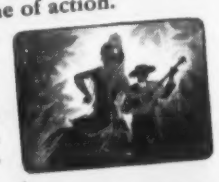
BACK THE ATTACK—BUY WAR BONDS

WITH PROGRAMS LIKE THESE,
PHILCO TELEVISION STATION WPTZ
HAS PIONEERED IN TELEVISION BROADCASTING

Since 1932, Philco has owned and operated its own television station, a rich laboratory of research and experience for television progress.

The Philco station has televised football, boxing, wrestling and other sports as well as news events direct from the scene of action.

Movies, variety acts, dramatic sketches, illustrated news talks and civic programs have been televised from the Philco studios.



PHILCO
Famous for Quality the World Over

Home Freezers Will Be Sold To Quite a Different Type of Market Postwar

So Says J. A. Walsh, Who Distributed Such Units Successfully Both Before and During The War

By Phil B. Redeker

HOUSTON, Tex.—Take it from a man whose distributing organization sold some 675 new home freezers before the War and $30,000 worth of rebuilt equipment for such purposes in 1943, the answers to a number of questions about the nation's food-buying habits will have to be made evident before the industry will rack up anything like the "million-a-year" sales volume of home freezer units now being rather freely predicted.

The man is James A. Walsh, president of J. A. Walsh & Co., Inc., distributing and engineering firm of Houston, Tex., which has established enviable records in the sale of refrigeration equipment.

Another belief held by Mr. Walsh and gleaned from his experience is that there will be a great difference in the approach to the city and farm markets for home freezers, including differences in the kind and size of equipment that will be required.

But before we get to the vital questions that must be answered before the big volume market will be attained, let's have Mr. Walsh review the course of the business as he has seen it.

"In the early stages of home freezer distribution a very limited number — only of manufacturers — only one of which made this equipment its sole livelihood—attempted to educate the American public in the storage of frozen food in the home," he points out. "Most of the advertising and sales effort went for the following markets:

THE WARTIME BUYERS

"1. The Hunter and Fisherman (a very limited market nationally).

"2. The thrifty home owner who would buy only large packages of commercially frozen vegetables at a price advantage, and buy quantities of beef, lamb, chickens, etc. on a wholesale basis. Thus he was able to pay for the cost of the home freezer unit in the food savings realized, and had the further advantage of having food handy in large quantities in case of any emergency."

While progress along these lines was reasonably satisfactory, and sales and distributing outlets were increasing on a fairly substantial scale, it wasn't until after the War broke out that a real boom in interest in and sales of home freezers came about, Mr. Walsh points out.

REASON FOR MARKET NOW

Principal reasons for this state of affairs in the viewpoint of Mr. Walsh are the following:

1. Rationing and threatened shortages of various perishable foods greatly increased the desire of the homeowner to have such a unit.

2. Increased public buying power began to have its effects.

3. Victory garden amateurs over enthusiastically planted more than they conuld consume, and were looking for a simple method of preserving their surplus foodstuffs. Shortage of canning materials further tended them to investigate the possibilities of home freezing.

4. More people raised chickens, ducks, rabbits, hogs, sheep, and cattle as a sideline, and sought to store meat products resulting therefrom for future use.

"All of this resulted in a buying rush which soon cleaned out practically all of the new equipment which had been manufactured for the express purpose of home freezing and storage, as well as a great many units manufactured for the storage or hardening of ice cream.

"In order to take care of the demands in our market, we purchased all of the used equipment available and rebuilt a great many units for use in storing food. As one result we gained much valuable experience in rebuilding and servicing this type of equipment—experience that would have had to be gained over years in normal times.

"Ice cream cabinets, while of a great variety of designs, can be broken down into two distinct classes.

"1. The ice cream storage cabinet.

"2. The hardening cabinet.

"The storage cabinet is by far the more common. The newer models are of the direct expansion type, but the earlier models were of the brine-system type.

"This ice cream storage cabinet, if properly insulated and tested to operate at 0° F., makes a very satisfactory storage cabinet, but it is not usually practical for freezing food.

BEST TO RE-MANUFACTURE

"A hardening cabinet is a more preferable unit for freezing food. These cabinets are better insulated, usually with 3 to 4 inches of cork, and are more heavily constructed throughout. Majority of these were of the direct expansion type, and were usually operated with a water-cooled compressor of 1-hp. or larger size, using sulphur dioxide, methyl chloride, or 'Freon-12' as the refrigerant.

"Such large compressors were required because they were designed to operate the freezer head in the manufacture of ice cream. In most cases we removed the freezer head and changed the units to ½-hp. or ¾-hp. air-cooled units, after removing the freezer head. These cabinets could then be operated at approximately—10° F. and were suitable for freezing as well as storing food.

"Most of these units had one compartment at the end, designed for storing ice cream mix, and such compartments maintained at around 35 to 38° F. were fine for pre-cooling, defrosting, or the storage of milk, beverages, eggs in shells, or other food not practical to freeze.

"We feel that the knowledge gained in rebuilding these various types of units and having the field experience on them, will be invaluable to us as distributors in the postwar period.

TWO DIVISIONS POSTWAR

Now, as to the views of Mr. Walsh on the postwar market for home freezers:

"We feel that there will be a great market for the home freezer, but not as great as many manufacturers apparently believe it to be.

"There probably will be two rather distinct classes of buyers.

"1. The farmer, or ranch owner.

"2. The home owner who lives in populated areas.

"On the basis of all market potential data, the city user should be far more numerous. However it is possible that the farm market may be the greater one. Only Time will give the right answer on this.

"The farm market, while it may not be as large, will hold special interest to a commercial refrigeration concern specializing in engineering services, and in a position to build trailor-made units, as many will be built to suit the farmer's particular needs."

HERE ARE THE BIG QUESTIONS

Here are some of the questions that market experience alone will answer—questions that in the opinion of Mr. Walsh hold the key to the future of home freezer sales on a broad scale to city dwellers.

1. Will the average homeowner be willing to spend $150 or more to have a home freezer?

2. Will he have the room for this additional piece of equipment?

3. Or will the homeowner want a "two-temperature" type household electric refrigerator with a good-sized space for holding already processed frozen foods?

4. Today the buyer feels that he wants a medium-sized unit (our average request is for a 6-cu. ft. cabinet), but after the war how big a cabinet will he want?

5. If the corner grocer installs a large low temperature storage system (which we think is logical) and the homeowner can pick up, or have delivered, his daily requirements, will he want to be bothered with one more piece of equipment in his home, taking up space, and costing something to operate?

SEES LOCKER PLANT TIE-UP

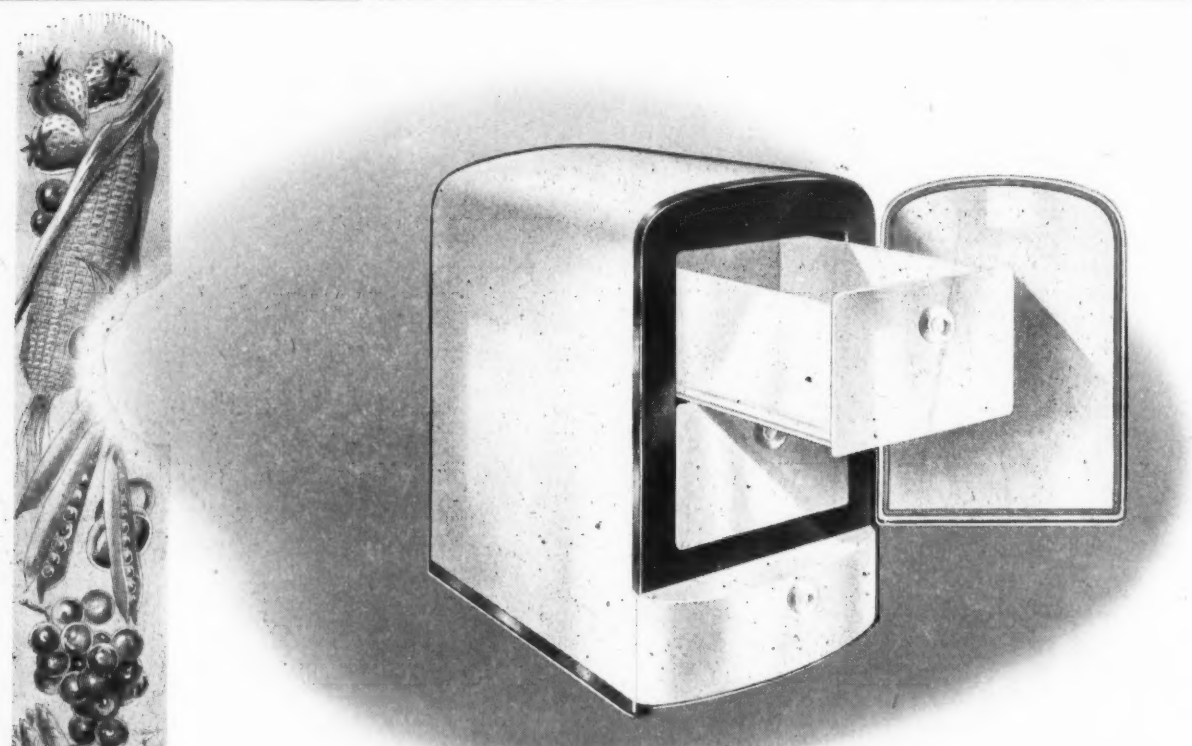
"We do not feel that the refrigerated locker storage plant, as we now know it, is competitive with the home freezer, but rather complements it," declares Mr. Walsh.

"It is likely, however, that there may be locker plants conveniently located throughout large cities, and that many people, especially renters, will use such locker plants instead of having their own home freezer.

"We think it also conceivable that apartment houses will have locker storage plants for their tenants."

This is another in the series of articles on the postwar marketing of home freezers, in which AIR CONDITIONING & REFRIGERATION NEWS is presenting the viewpoints of some of the pioneers in the merchandising of this type of equipment.

A number of pertinent questions are asked in this article, answers to which may possibly be necessary before the full market potentialities of the home freezer are realized.



Frozen *Fresh* foods

... at your finger tips all year

A dream? Not at all. When the war is won SEEGER Refrigerator Co. will make this dream a reality. Yes, you'll be serving your family summer-fresh foods all year 'round (purchased in-season when prices are lowest or grown in your own garden) stored in a "SEEGER Freezer" Storage Cabinet. It's a SEEGER convenience that offers the successful freezing and storing of foods right in your own home.

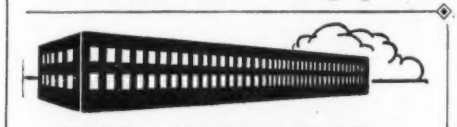
SEEGER, first in refrigeration for almost half a century, has perfected this "SEEGER Freezer" Storage Cabinet. Through extensive work and thought . . . through their established knowledge of refrigeration products, SEEGER has planned this great achievement for your post-war use.

SEEGER REFRIGERATOR CO., SAINT PAUL 6, MINNESOTA

Look to SEEGER

for the best in freezing cabinets

PIONEERS IN COMMERCIAL · HOME · INDUSTRIAL REFRIGERATION



WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates American Machine Co. Beloit, Wis.

Kipman AUTOMATIC REFRIGERATION

Manufacturers!

Do you now have authorized service facilities in Boston and Metropolitan area? And if so, will they be satisfactory for the post war business you are planning? If not, now is the time to get set.

Our firm have been service specialists for eighteen years and serve an area of two million people. We are well financed and have competent employees and ample facilities, shop space, trucks, stock rooms, etc. to do a fine job for you. We are familiar with air conditioning, domestic and commercial refrigeration, low temperature applications, including ice cream freezing and food freezing. We can offer complete service from application engineering to warehousing, delivering, installing and servicing on all kinds of refrigeration or other major appliances. We would appreciate an opportunity to discuss the possibility of making our service department YOUR service department.

Miller & Seddon Co., Inc.

2089 Massachusetts Ave.

CAMBRIDGE, MASSACHUSETTS

Dealer's Training School Adds 25 New Repairmen to Industry

Here are some of the many men who studied refrigeration servicing in the training courses held at the dealership of C. W. Shackelford (seated at desk) in Wilmington, N. C. Using Frigidaire training literature, Mr. Shackelford graduated 45 students from the advanced course recently.

* * *

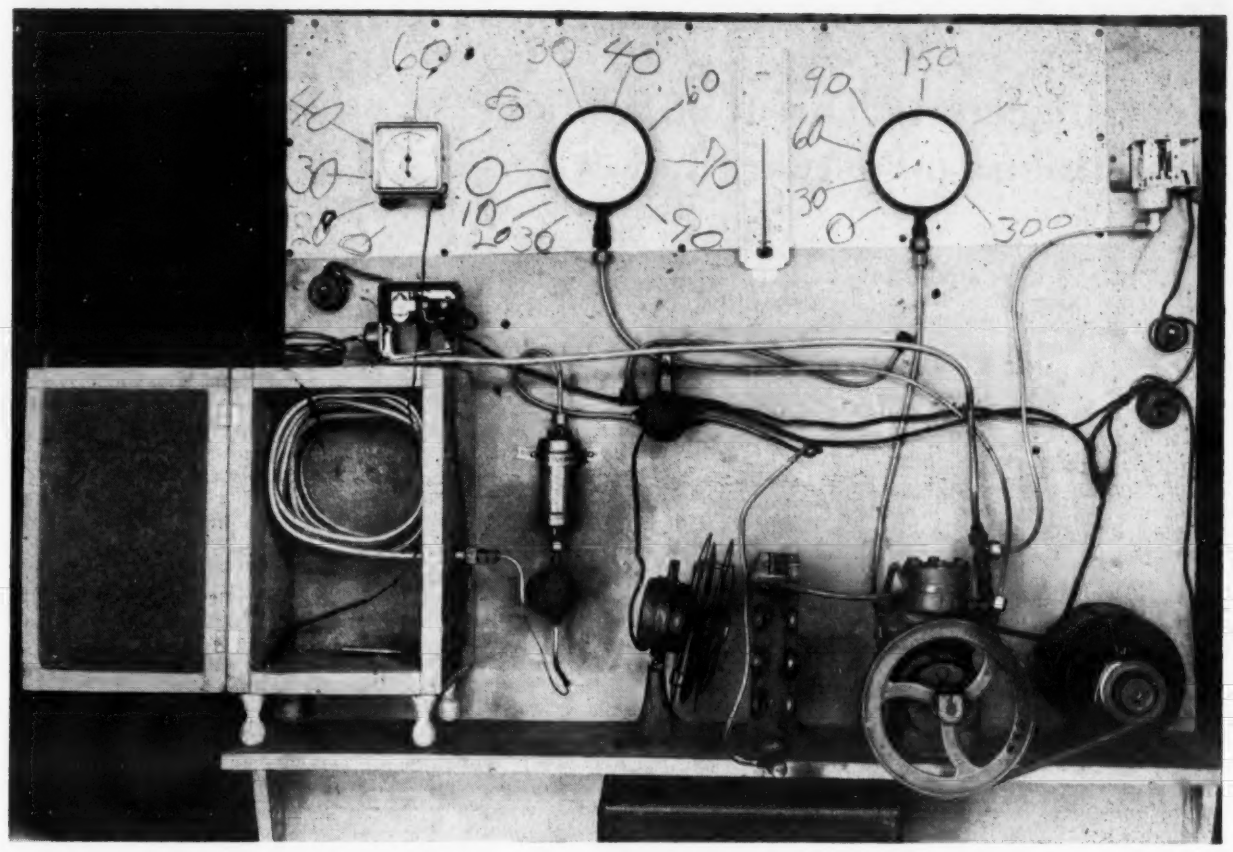
Primary and Advanced Classes for Scores Of Students Conducted by C. W. Shackelford

WILMINGTON, N. C.—Twenty-five new workers are now employed as refrigeration repairmen in this area as the result of a training course conducted by C. W. Shackelford, owner of Shackelford's, Frigidaire and Zenith dealership here.

At the beginning of the course there were 107 men enrolled, reports Mr. Shackelford, and of this number 65 completed the primary course. The advanced course was finished by 45. Three three-hour lessons a week were held at the dealership from Jan. 12 to June 1.

The course of instruction was free to students. Literature for the classes consisted of the primary and advanced training courses prepared by Frigidaire Division, which was augmented by practical shop experience in servicing both household and commercial refrigeration equipment.

To demonstrate the principles of refrigeration and the functions of various units comprising a refrigeration system, Mr. Shackelford developed the equipment panel shown in the accompanying photograph.



To provide visual demonstration of just how a refrigeration system operates, C. W. Shackelford prepared this large interesting panel for use in training new repair men. Functions and relationships of such devices as motor, compressor, condenser, receiver, evaporator, thermostatic control, etc., may readily be seen when the equipment is spread out as shown. Note the large dial thermometer and the large simple and compound pressure gauges, which can be easily observed by the students, a further aid in group instruction.

Occupation of Home Owners Stressed In Design Contest for Builders

CHICAGO—Does a person's occupation influence the type of home he buys?

That question may be answered in an unusual house design contest for men who actually build homes—members of the National Association of Home Builders of the U. S.—in a $6,000 (War Bonds) contest sponsored by the Chicago Metropolitan Home Builders Association.

"People of different occupations in this country might be more comfortable in homes designed to their ways of life, but, as far as we know, this has never been recognized in our architecture," declared George F. Nixon, Chicago home builder and a director of the national association.

"All efforts along design lines in the past have been treated from the point of view of style or regional design; for instance, a home builder will offer his client a "Georgian brick house,' or a 'Cape Cod cottage,' or a 'California ranch type.' Now we propose that the builder offer the 'city home,' the 'seaside home,' the 'industrial worker's home,' etc."

A $1,000 War Bond will go to the prize-winning design in each of the following classifications: the city home, the suburban home, the industrial worker's home, the farm home, the summer resort home, and the veteran's home or the "home for two."

The City Home, points out the contest committee, may be viewed as the "white collar worker's home," and as such will probably differ from the suburban home and the industrial worker's home, depending, of course, on how the people live.

The Suburban Home is for those city workers who don't want to live in town. One of its chief design features will be its larger size, believes the committee.

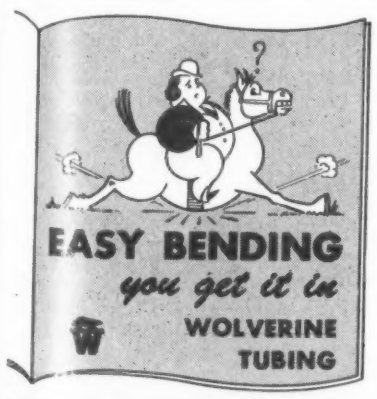
The Industrial Worker's Home should be designed for industrial regions where the workers will live near the modern and attractive post-war factories.

The Farm Home, offering a potential market of 1,000,000 units, might well be redesigned for rural dwellers in the light of modern improvements in this field, it is thought.

The Home for Two should be a small but substantial house designed for newly-weds, including returning veterans, and for retired couples.

The Summer Resort Home faces an increasing demand, declares the contest committee, and probably should be designed with the realization that many families will live in these homes permanently upon retirement. Both mountain and seashore homes will emphasize window space.

Scheduled to close Oct. 20, this contest is a pre-convention feature of the national association's annual meeting, to be held in Chicago next January.



DO YOU DESIRE REPRESENTATION IN MIDWEST?

Firm establishing offices in Dayton to represent manufacturers in Midwest. Personnel have engineering and sales background and intimate knowledge of refrigeration, automotive, aircraft, and other industries. Now is the time to get set for the large post-war markets in this territory. Well financed. Write today. Box No. 1607, Air Conditioning & Refrigeration News.

Dorrance Supply Named Distributor For Crosley

YOUNGSTOWN, Ohio — Appointment of the Dorrance Supply Co. of Youngstown, Ohio, as Crosley distributor in the northeastern part of Ohio and the central western part of Pennsylvania has been announced.

R. G. Dorrance, who is owner and manager of the Dorrance Supply Co., was formerly president of the Brown-Dorrance Electrical Co., Pittsburgh, Tri-State Distributors for 30 years. Mr. E. T. Allen will assist Mr. Dorrance as sales manager. Mr. Roland Allen, who is backed by 15 years experience in the electrical supply field, will be service manager.

TO BUILD ON A FIRM FOUNDATION
A GOOD NAME
LONG EXPERIENCE
EXTENSIVE PRODUCTION FACILITIES
AMPLE RESOURCES
The future distributor of Savage Frozen Food Cabinets will build his business on the firm foundation of well-pleased customers.
Savage cabinets will be the product of long experience — extensive manufacturing facilities — thorough research, and a practical understanding of what it takes to assure dependable operation in the hands of the user.
They will have the same outstanding qualities that made Savage Ice Cream Cabinets so successful.
Bearing a good name, and priced to be competitive, Savage Frozen Food Cabinets will sell easily at a good profit to the distributor.
Savage Arms Corporation
Refrigeration Division
Utica, N. Y.
SAVAGE Thrift CABINETS
FOR
FOOD MERCHANDISING • ICE CREAM • FOOD PROCESSING and STORAGE

Retailers Fear Price War If Utilities Promote Appliances to Maintain Load

Poteat Discounts Threat of 'Unfair' Competition In Postwar Market

ABSECON, N. J. — Retailers are worried.

For one thing, they're afraid "cut-throat" competition may result if utilities start pushing appliances as load builders after the war to take up the slack in power consumption expected when war industries cease.

For another thing, they don't want competition from these outlets operating with little or no store overhead.

In addition, the prospect of a cut in distribution costs considered necessary by some factors in the appliance industry has the retailers wondering if they'll have to slash off employes in the face of returning war veterans.

All this was brought out into the open at the postwar conference conducted by the National Retail Dry Goods Association at the Seaview Country Club here recently.

J. R. Poteat of General Electric Co., one of the scheduled speakers at the conference, answered some of the retailers' questions, at least for G-E.

General Electric has no desire to give special price consideration to utilities, or to foster "cut rate" outlets of any kind, Mr. Poteat said. In this connection, one utility executive declared that his company had sold only a small percentage of refrigerators before the war, compared to the independent dealers, and expected to sell even fewer after the war.

The department store men were also disturbed by a statement of Mr. Poteat that production of electrical appliances must be increased by a reduction in distribution costs, feeling that this implied a reduction in employment by retailers.

ANOTHER VIEW ON COSTS

Some people at the conference, however, thought that lower costs could be achieved without sacrificing employes, and would ultimately lead to even greater employment, citing the tremendous growth of the refrigeration industry which followed the gradual reduction in retail prices.

Excerpts from Mr. Poteat's prepared talk, the "Outlook for Electrical Appliances," follow:

"The electrical appliance industry views both the immediate and the ultimate postwar periods with sound optimism. The elimination of electrical appliances from the shelves of the retailers of this country during the war, has painted a vivid picture of their essentiality to the women in the homes of America. The performance of electrical appliances which has found their way into millions of homes, has made them very precious in the eyes of their users. The prospects of more servantless homes in the future, makes the fantastic stories of what electricity will perform almost acceptable to women.

"It appears sensible, therefore, for the electrical appliances and electric power industries to prepare for larger sales and greater use. (We believe we won't have very much difficulty to find the pony that Uncle Sammy Claus has hidden for our use postwar.)

LOSS OF LOAD FEARED

"During the war period the electric power industry has built up a capacity to serve industrial loads, which most forecasters agree, will be far from utilized when these war loads no longer exist. People maintain their living standards in their own homes against every circumstance which tends to reduce them. Thus the domestic user constitutes the most stable load for the electric power supply industry.

"This stability, plus the greatly increased usage of electrical energy which appliances require—particularly the electric range and the electric water heater— makes electrical appliances the prime claimants for the interest of the power industry in their plans to utilize their excess capacity after the war. The electric power industry is setting its goals, for the promotion of greater sales of electrical appliances, higher than the industry has ever dared before.

"The average home now uses slightly under 1,100 kilowatt hrs. per year, or less than 100 per month. I might cite my own case to indicate the expanding possibilities for increasing this use by appliance sales and thus show the bright future for the appliance industry. While there are still certain electrical devices which are not installed in my home, my consumption averages about 1,000 per month or 12,000 kilowatt hrs. per year. In other words, my consumption is eleven times the national average consumption for domestic users.

SEEK 5,000 KWH. YEARLY

"An objective of 5,000 kilowatt hrs. per year within the next five years, succeeding the end of the war, has been proposed for the power industry. Even a doubling of present usage will create simultaneous appliance sales of this order of magnitude: 5 or 6 million electric ranges, 2½ to 3 million water heaters, 10 to 12 million new refrigerator sales—even these totals taken together, and not individually, would scarcely double consumption. Add to this a large number of small appliances, washers, ironers, etc., and you can see the alluring picture.

"Much has been said about the use of high frequency electronics for heating appliances, such as the electric range, after the war. I have baked biscuits electronically myself. Great strides have been made in industry during this war period in the use of electronic heat. For the rapid heat treating of metals or for brazing, etc., the electronic heater has made a magnificent contribution. In each case, however, repetitive manufacture if involved and a fixture applicable to a specific job is used.

ELECTRONIC HEATING IMPRACTICAL

"Obviously, in the oven of a household range it is quite impractical to provide one shape lining for a chicken, another shape for a loaf of bread, a third for a pie, a fourth shape for popovers, and expect the user to use the proper shape each time. I don't think any of us would enjoy a roast that looked like a popover or a pie that was seared like a steak.

"What I am saying, therefore, is that radical changes in application of electricity through appliances may not be expected immediately after the war or within two to five years after the war. Design changes to give a device more utility, better appearance, and lower cost can be confidently expected.

I am endeavoring to answer questions which are in your minds about the future of the appliance business. Before I go further, perhaps it would be well to indicate what these questions are. Here are some of them:

"Will postwar prices be higher than prewar?

"Will the discount trend be up or down?

"How soon will appliances become available?

"Will postwar models be the same as prewar?

"Before I paused to identify these questions, I was addressing myself to the subject of the characteristics of postwar models. And I believe I gave you what appears to be the answer for the entire industry—immediately, the production of prewar models—within 12 months, the introduction of new design.

PRICES WILL BE HIGHER

"What about postwar prices? There's no question but that prices will be higher after the war. How much higher will be determined by many factors. In the first place, it depends on how one views the postwar market. One may say, since people have lots of money and need appliances, they will buy anything.

"So we can make just what we did before the war. Of course, this is the philosophy which will produce employment the fastest. And it is thus most important. But how long can we stay with prewar models?

"On the other hand, people may not be as willing to buy a product which has not been visibly changed from prewar models at a price say 25% to 30% higher. Even similar models with a new dress may not be attractive to this group. Our designers may be faced with the necessity of stripping down and simplifying products to reach the same price classes as existed prewar. Thus masses of people who could not have afforded a prewar model, but have moderate buying power because of the wide accumulation of war savings, would constitute a tremenodus market for such products.

WILL 1942 MODELS SELL?

"Or one might go all the way and say that people won't buy anything reminiscent of prewar products, and a radically new device—regardless of its increased cost—will find a ready market. But to the immediate purchaser the appliance will be new and not just a prewar model. Replacement sales will be largely to replace older models rather than models of immediate prewar design—and these latest models were very much worth having. I'm inclined to believe these two last points of view apply more to frequently purchased products—even to automobiles—rather than infrequent appliance purchases. Quality considered, clever design can hardly overcome excessive labor and material costs increases.

"It may be that the answer to the third question relative to the trend of discounts, may be somewhat of a determining factor as to whether people will buy at all. If in order to stimulate the market it is necessary for manufacturers, distributors, and retailers alike to be satisfied with

(Concluded on Page 15, Column 1)

Illustration is from Inland poster showing operation in the production of the Inland-made carbine.

The battle-worthiness of the Inland-made Carbine has been proved by gallant American foot soldiers in landing operations all over the world. Light and maneuverable, this vicious little .30 calibre gun easily and quickly fires 15 high-velocity slugs from one clip with deadly accuracy.

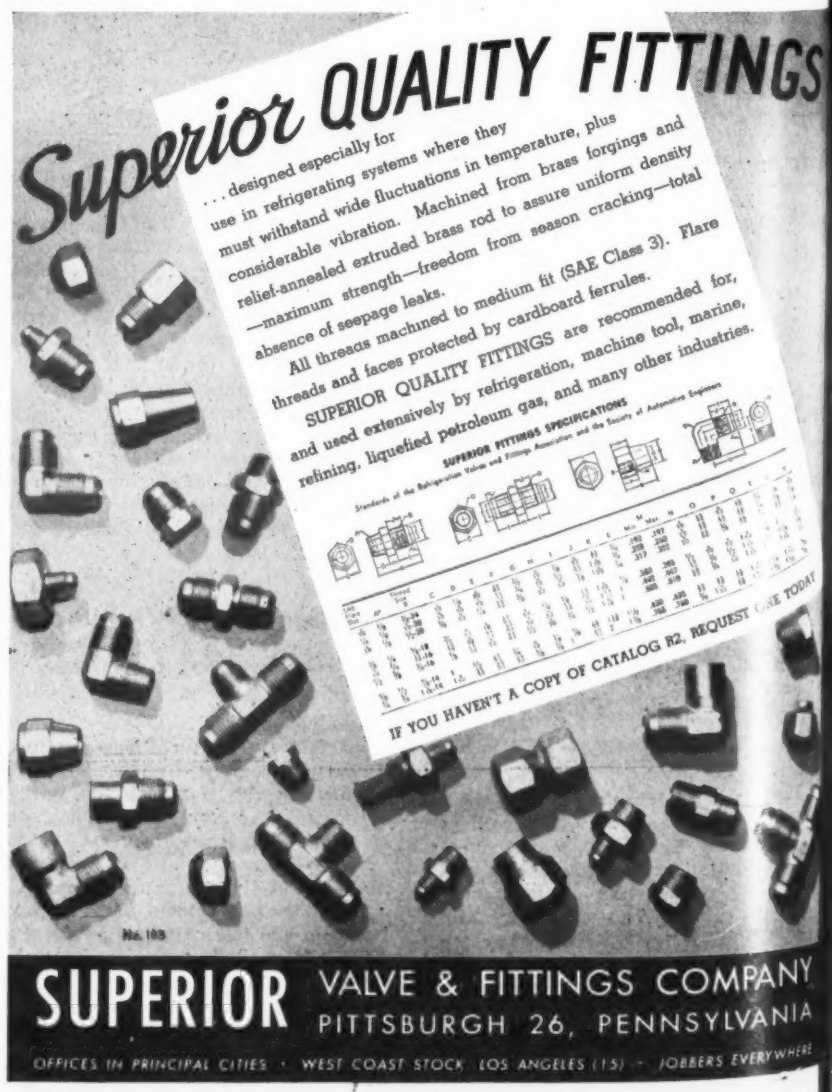
Called an outstanding development of the war, the Carbine is a prime example of Inland's versatility in engineering and manufacturing. Its production achievement—starting from scratch—has gained Inland wide recognition for many important contributions to the technique of mass production of firearms.

The Carbine is one of many Inland products for Victory which are helping to give fighting fire-power to invading Americans on the beaches of France, Italy and the South Pacific.

INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio

INLAND Manufacturing
RUBBER, METAL, PLASTICS

Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.


Superior QUALITY FITTINGS
. . . designed especially for use in refrigerating systems where they must withstand wide fluctuations in temperature, plus considerable vibration. Machined from brass forgings and relief-annealed extruded brass rod to assure uniform density —maximum strength—freedom from season cracking—total absence of seepage leaks.
All threads machined to medium fit (SAE Class 3). Flare threads and faces protected by cardboard ferrules.
SUPERIOR QUALITY FITTINGS are recommended for, and used extensively by refrigeration, machine tool, marine, refining, liquefied petroleum gas, and many other industries.
IF YOU HAVEN'T A COPY OF CATALOG #2, REQUEST ONE TODAY
SUPERIOR VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA
OFFICES IN PRINCIPAL CITIES · WEST COAST STOCK LOS ANGELES (15) · JOBBERS EVERYWHERE

High Costs & Low Prices May Squeeze Retailers' Discounts, Poteat Tells NRDGA Group

(Concluded from Page 14, Column 5)

less of the cost of the product, in getting it to the consumer, undoubtedly the trend of discounts will be downward. Services to the consumer may have to be curtailed to compensate for a reduction in list and discounts.

"Whether the discount is lower or higher or the same will depend on the judgment of people like yourselves as to what the public will pay, which in itself will determine the amount of money left between an increased manufacturing cost and the retail price with which to carry the goods to market. (Trends postwar—cost not speed—less overtime—more efficient labor, better equipment. Lower distribution costs. G-E thesis to drive costs down to create lower and lower costs as well as newer and better services.

"When will appliances be available? Under authorization of both OPA and WPB we are now manufacturing one model alarm clock. We have been assured a year's production on this item and about October will be manufacturing at the rate of 25,000 per week. You have seen in the public print information about flatirons. As one of the leaders in the flatiron business we have been awarded a substantial percentage of the total allocation.

FLATIRONS BY OCT. 1

"You may expect to see our flatirons filtering through to the trade about Oct. 1. We expect to have two models available—one a 660 watt automatic at $5.70 and one 1,000 watt at $8.55 including federal excise tax. We expect to continue in the manufacture of flatirons indefinitely. In other words, we expect this present assignment to mean that we are definitely reconverted to flatiron production.

"As to new applicanse, we expect to have an automatic percolator in the low price field which is a new development. A line of fans for the home in the inexpensive class, which is an area we have not covered before, is going to be made available. For the time being, fans are not available to other than specified war uses.

"A sunlamp bulb has already been designed to operate on 110 volts. The lamp will sell for $15. However, it is our considered opinion that the postwar sales of this item will be as a package with a heat lamp in a fixture. We do not expect to see sunlamps put in 110 volt outlets all over the house because of their expense and the danger from breakage where children are around. One other item — a new idea in roasters—is being made available and will be ready in the postwar. You see, I am being specifically General Electric in my comment on some of these items because I cannot speak for the rest of the industry on matters of this kind. I think, however, you may take our case as typical.

ALL-OUT ON REFRIGERATORS

"On refrigeration we are committed to a program which will disregard cost to get us back into the household refrigerator business as quickly as the Lord and WPB will let us, when the time is right. We do not intend to wait until we know for sure what the market will absorb of our product. We will produce and produce, if necessary, until they are sticking out of the windows of every warehouse we have, before we will slow down because it looks as if we may not be able to dispose of them quickly. But you know what the immediate postwar outlook is for refrigerator sales.

"We may not be able to put a refrigerator in a warehouse for years after the war. Production for consumption, more quality goods for more quality conscious people at constantly lower and lower prices will be our theme as it has been in the past. We will enlarge our factories to almost double the tremendous production we turned out in 1941.

"We are now building a new refrigerating unit which we are using as a replacement for the old monitor top. This unit was developed before the war, and fortunately fitted into the wartime replacement plan beautifully in that it required a minimum amount of material and was well adapted for top mounting.

"We have been told by WPB that the stock pile now available is not enough for war needs and that no new refrigerators will be released this year. There is a possibility of some manufacture this year, but that possibility is locked up in what happens to Germany. There may be some before the end of the year if Hitler is knocked out. After release of materials for manufacture, we will be able to get refrigerators into the field only in limited quantities at first. Toward the end of the 12 month's period we should be in good quantity production.

FEW MODELS PLANNED

"We plan one medium priced semi-deluxe seven, a low priced six, a four-cubic foot home freezer, and a ten-cubic foot two-temperature model for the first manufacture. Manufacturing costs are now up about 25%. Any price advance less than that percent due to cost increases will have to come out of margins. But we think we can build a four-cubic foot home freezer to retail below $175 and a ten-cubic foot two-temperature refrigerator not much over $300. This will give retailers models in all types of refrigeration.

"We expect to cut the number of models in our line. We regularly made 18 prewar; we hope to cut this to 12 models of which three will be home freezers and two will be two-temperature boxes.

"As for washing machines, the emphasis postwar will be on automatic washers. General Electric will have an automatic washer. It will be portable and will incorporate features that have been indicated from the field as most important and desirable. We believe it will be outstanding and yet competitive in price. We will also provide you with wringer washers. New type wringers will be offered that will contribute substantially to their acceptance. New flat-plate type ironers will make their appearance—likewise new portable ironers will be available. The electric laundry with washer, dryer, and ironer will come into its own.

LITTLE CHANGE IN RANGES

"In electric ranges we expect to re-enter the field with virtually the same models which we had at the time of shutdown. This means that in the volume selling items there will be three full size ranges equivalent to the prewar price classes of $100, $150, and $200. An apartment house model will also be available. We expect to continue a limited line of this character in the new post-postwar models which will follow the models with which we re-enter the business.

"The only limiting factor in getting back into electric range manufacturing will be our ability to obtain materials. We expect to have our reconversion and job training well along by the time materials begin to come into the plant for fabrication. We anticipate that our range manufacture will be under way in a matter of weeks rather than months after we get the "go-ahead," and that by the end of the first six months we will have reached the peak capacity of our plant.

"We are planning substantial increases in plant capacity so that in the second year after the war we will be able to meet the demands that will be placed upon us, not only for the ranges we have produced in the past, but for new models which at that time will be available. Reconversion to water heater manufacture will follow the same pattern as electric ranges.

"Much has been published about an allocation of electric range manufacture—88,000 in 1944. The first six months of 1944 saw about 20,000 ranges produced—practically all of 20 inch low oven type—and most of these allocated to government use. Widespread reconversion of the industry will wait for changes in manpower and material situations. We rather expect these to come early in 1945.

TRAINING OF NEW SALESMEN WILL BE HIGHLY IMPORTANT

"The training of new sales people will be one of the important appliance industry jobs. We are preparing materials for this responsibility and will provide assistance in training, unique to the annals of appliance merchandising.

"Of the first 10 critical items of civilian need listed by OCR, six are electrical appliances and a seventh usese a motor. The demands on the electrical appliance industry will surely tax its productive capacity. Women need and want our products. To him who prepares to serve the market will go the rewards. At the green light our joint responsibility is clear."

Montgomery Heads Sales Of Lynch In Southwest

EARL W. MONTGOMERY

* * *

DEFIANCE, Ohio—Earl W. Montgomery has been appointed manager of zone 4—covering southwestern states with headquarters in Dallas, Tex.—for Lynch Mfg. Corp. here, announces R. L. Sears, sales manager.

For the past eight years Mr. Montgomery has been active in specialty distribution through automotive and specialty jobbers. He advanced from the post of "missionary man" to that of zone manager for one of the country's leading manufacturers.

RCA Victor Maps Broad Plan to Rehire Veterans

CAMDEN, N. J.—Preparing to reemploy some 6,000 former workers now serving in the Armed Forces, RCA Victor division of Radio Corp. of America has mapped out extensive plans for this rehiring program, it was announced by Forrest H. Kirkpatrick, personnel administrative director.

By law, all companies are required to give returning veterans their former jobs, or similar positions of equal pay and seniority unless circumstances make it impossible or unreasonable to do so. In this event, RCA Victor hopes by mutual agreement to provide an otherwise suitable job and training for such jobs. Placement would then be made at the highest paying jobs available for which the veterans can qualify.

New experience and skills acquired by the former employes while in service will be utilized through upgrading wherever possible, the company announced. In addition, a broad training program is planned which will include: on-the-job training; apprentice training; training for upgrading; special training programs to develop aptitudes and capacities of the veterans; and educational guidance to encourage employes to participate in Federal, State, and local educational programs.

Returning veterans are also permitted to take special training offered by the Government before returning to employment with RCA Victor under the plan. Company approval is required beforehand, however. Special effort will be made also to accommodate handicapped veterans.

WOLVERINE OFFERS
50 FT. REFRIGERATION TUBE
ON A "PER COIL" BASIS
—NO INCREASE IN PRICE

Extensive research and contacts with many jobbers confirm our belief that many advantages can accrue to jobbers if they could buy refrigeration tubing by the coil rather than by the pound.

Wolverine Tube Division now announces that prices for this material have been converted from the traditional "per pound" basis to the new "per coil" basis, and new price sheets have been issued reflecting no increase in tube cost.

Individual cartons containing one 50 ft. coil of tube have been designed. However, war emergencies prevent our using this new package now.

The simplification achieved in this new plan of marketing and handling of refrigeration tubing will help the jobber in (1) ordering, (2) reselling, (3) figuring out invoices, and (4) costing inventory.

WOLVERINE TUBE DIVISION
CALUMET & HECLA CONSOLIDATED COPPER COMPANY
1411 CENTRAL AVENUE DETROIT 9, MICHIGAN

Investigate
SHERER
...decide Now on your Postwar source for
Refrigerator EQUIPMENT
WRITE
SHERER-GILLETT CO.
MARSHALL, MICHIGAN

Air Conditioning & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

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They'll Do It Every Time

By Jimmy Hatlo

35-40-45... WELL, SO LONG, MR. BLOOPER... IT WAS A PLEASURE TO MEET YOU. I HOPE NEXT TIME YOU'RE IN TOWN WALDO BRINGS YOU UP TO THE CLUB FOR REVENGE
IT'S A SHAME TO TAKE THE GUEST OF HONOR TO THE CLEANERS, EH, WALDO? ...ER... JUST MAKE THAT CHECK OUT TO CASH, MR. BLOOPER.. AND BY THE WAY, WHEN YOU GET BACK TO THE HOME OFFICE PUT ME DOWN FOR ONE OF YOUR FIRM'S CALENDARS...
ER.. I DIDN'T REALIZE YOU WERE A HEAVY LOSER, CHIEF.. MAYBE NEXT TIME YOU'LL..
THE FIRST THING BLOOPIE WILL DO WHEN HE GETS BACK TO THE HOME FRONT IS FIRE WALDO BY AIR MAIL...
THE OL' MAN THOUGHT HE WAS A GOOD POKER PLAYER AN' WALDO A VALUABLE EMPLOYEE UP TO NOW
WALDO SHOULD'VE ENTERTAINED THE BOSS AT SOME BINGO PARTY, IF YOU ASK ME
11-17
INVITE THE FIRM'S VISITING BIG SHOT TO ENJOY A LITTLE GAME AND THEY'LL DO IT EVERY TIME
Thanx to BOB RICHARDSON, PASADENA, CALIF.
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What Future Have Locker Plants?

DEBATES are now taking place in industry circles over the long-range possibilities of the locker plant.

Will the present oversubscribed demand for locker storage space in urban centers disappear with the waning of Victory Gardens? Will the availability in quantities of below-zero cabinets cause the obsolescence of the locker plant idea? Will great strides in transportation mean less interest in rural area locker plants?

To all of these pertinent questions the locker plant enthusiasts reply in the negative. They say that the locker plant habit is here to stay.

While admitting that the war overcame original inertia and put the idea over with a bang, they feel sure that the convenience, service, and high standard of food quality now enjoyed by locker plant customers will be values these customers will be unwilling to relinquish once the war ends.

LOCKER BOOM EXPECTED IN URBAN DISTRICTS

In the urban areas authorities look for a widescale increase in the number of locker plants, just as soon as labor and materials become available.

Real estate men, they say, are planning locker plants for suitable buildings which they expect to be empty come the war's end. Grocers and butchers in numbers want to add small locker systems to their stores—believing that such a move will help them hold their customers.

Others planning on entering the field include filling station operators imbued with "one-stop shopping service" ideas; chain stores looking for additional services and lures for customers; and apartment house owners who want to join the vanguard of a coming trend.

Many fathers of service men, looking ahead to the creation of civil-life opportunities for their sons, are making inquiries about locker plants.

Most new apartment houses, the enthusiasts insist, will be equipped with locker storage at the outset. Older apartment buildings, in order to compete for tenants, will be forced to install them. Space requirements will probably prevent apartment dwellers from using individual low-temperature boxes.

If, as, and when Victory gardeners stop home gardening, it is thought that the obvious price advantages of buying vegetables in quantities during their respective seasons will make the use of frozen storage lockers so economically desirable to city folk that their use will continue to be both money-saving and a ladder to a better living standard.

LOCKERS SURE TO GROW IN MOST RURAL AREAS

As for the rural areas, even the most skeptical seem to think that the future for the locker plant is bright. Again the considerations are both economy and convenience. For his own use the farmer will want to freeze and keep adequate quantities of his produce available. He will also want to hold some of it for better prices than prevail during the harvest seasons.

Defenders of the locker plant and its future position in the nation's economy can make out an excellent case. It appears to be one type of small business affording eminent opportunities for the entrepreneur and a high-grade outlet for venture capital.

And, in the bargain, those who make and sell refrigeration equipment can surely count on this market as an excellent source of revenue during the growth years to come.

Like the home low-temperature storage cabinet, the locker plant is ready to usher in a new era of better and cheaper eating for American families.

WILL THE HOME FREEZER CUT INTO LOCKER RENTALS?

Some locker plant operators are considerably worried over what the possible volume sale of home freezers may do to their business. This thought is said to have deterred some capitalists who were on the verge of investing in chains of locker plants.

Others aren't worried at all. On the contrary, they reason, the national promotion of home freezers will encourage the use of more frozen foods and *more locker space.*

They look at it this way: hundreds of thousands of homemakers will buy a household refrigerator with a frozen food compartment. Other hundreds of thousands will buy small home freezers. Neither type of refrigerator will provide adequate storage space for the frozen foods homemakers will learn to want and need. So, they'll turn to the locker plants for that extra capacity.

RESTAURANTS MAY FIND LOCKER SPACE INVALUABLE

An additional demand for locker plant facilities may well come from hotels, restaurants, and clubs, it is believed. They will want locker space for emergency storage of foods prepared in excess of needs. When food-serving establishments return to normal times, they'll again be faced with the age-old dilemma of trying to guess how many will come to dinner. If they overprepare, they can store their unbaked pastries, etc. in a convenient locker plant, to use when more come to dinner than expected.

Locker storage is viewed as one means of answering two American dilemmas: apparent agricultural overproduction, and obvious underconsumption of foods by low-income families. Through the preservation of perishable foods—of which underconsumption is most flagrant—that otherwise might have gone to waste, greater supply should mean both lower average price and greater total income to the producer, because of greater volume of sales.

Access to locker storage plants encourage the farmer to grow more foods for his own consumption, too, and lead to crop diversification. Particularly in the South, this situation should lead to the betterment of the farmer's position.

LOCKER PLANTS MAKE SMALL FARMS MORE ATTRACTIVE

In recent years a trend toward bigger and bigger farm units has been worrying those who have the best interest of agriculture and the nation at heart. Those who yearn for the political well-being of the republic say that the small farmer is the perfect example of the independent citizen, the voter who will not be pushed into and around by pressure groups. And agricultural authorities claim that small farms are often highly efficient, that their disappearance would be a loss to the nation's productive resources.

These agricultural authorities say without equivocation that perishability of the product, plus unprofitable prices in seasons of lush production, discourage small farmers more than any other factors. The locker plant provides a lot of help in ameliorating this situation.

If the farmer no longer has to waste unmarketable food, or has to sell it at forced low prices, his independence is vastly increased, and his margin of profit takes a long jump.

15,000,000 LOCKERS SEEN AS POSSIBILITY FOR U.S.

Looked at from this angle, there are some visionaries who dream of the day when the nation will be served by some 12 to 15 million lockers—and an industry with a capital investment of more than $500,000,000! Such expansion might well bring locker rentals from a present high of $2.50 per month down to 50 cents per month. Even if this dream only comes half true, you could bank on a sharp reversal of the population trend from farms to cities, and the nation would have a new partial solution to coming unemployment problems. Through encouragement of diversification, cotton and wheat acreage, of which we will have so serious an overabundance, might profitably be diverted to the production of vitamin-rich, perishable foods.

Thus the nation as a whole has a great stake in the expansion of this locker storage business. Many congressmen see the possibilities; and it's quite likely that favorable conditions for the growth of the business will be established and maintained.

LETTERS

CORPORAL FINDS THE NEWS HELPFUL & STIMULATING

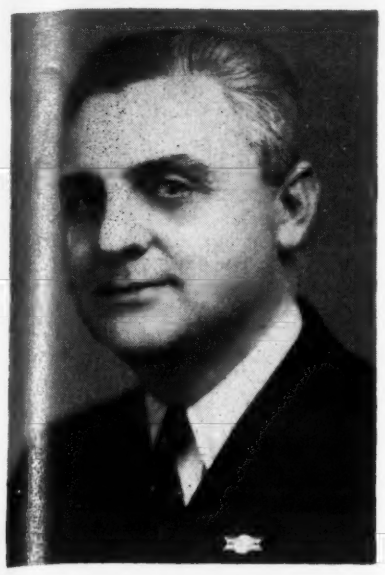
A.P.O. 980, Seattle, Wash. (Aleutians)
Seattle, Wash.

Editor:

Helpful to me are the articles on "Army Refrigeration Problems" by P. B. Reed. Also G. F. Taubeneck's editorials, and his columns on postwar keep me from stagnating at this overseas station.

CPL. ROGER CHESBOROUGH

Heads Coil Firm's Sales



H. A. THIBAULT

Recently appointed sales manager of the American Coils Co.

New Product and New Executive Setup Are Announced By American Coils Co.

NEWARK, N. J. — Announcement of a new air conditioning unit and a new organization setup has just been made by Thomas W. Binder, president of American Coils Co. here.

Known as the "Amcoil Comfortaire Conditioner," the new unit can remove 90% of the latent heat and up to 35% of sensible heat, claims the company. Dry, healthful air without low temperature shock is achieved by this unit, according to Mr. Binder.

Hector A. Thibault is sales manager of the firm. Formerly he was service manager in charge of parts with Brunner Mfg. Co. for seven years, and for nine years previously managed sales for the Bergan Supply Co., then distributing Servel Electrolux and Sparton radios. He came to American Coils from the Union Fork & Hoe Co., Rome, N. Y.

Other executives in the American Coils Co. include George Addonizio, legal assistant; Louis Meringolo, executive assistant; Albert Dorfman, production assistant; Thomas Warren, test engineer; John Brody, John Rasmussen, and Harry Steinmark, production engineers; and Benjamin Cloves, chief draftsman.

ODT Again Accepting Applications For Light Trucks, But Requirements Are Stiff

WASHINGTON, D. C.—The Office of Defense Transportation on Aug. 15 resumed the acceptance of applications for the purchase of new light motor trucks for essential civilian use. The action is expected to dispose promptly of the small number of such vehicles remaining in dealer's stocks, ODT said.

Acceptance of applications for these trucks (below 9,000 pounds gross vehicle weight) was discontinued last month because of the exhaustion of the essential civilian pool. On Aug. 7 Government exempt agencies relinquished their claims on the light units remaining and these units reverted to a common pool. This pool will now be drawn on by essential civilian users, as well as by Government exempt agencies.

ODT district offices have been notified that applications may be approved and forwarded to Washington for final consideration when the applicant furnishes a letter from a sales agency stating that the specific light truck is in stock and giving the make and serial number. The letter also must state that a certificate of transfer or Government exemption permit for the particular unit has not been presented or held by the truck sales agency.

'Postwar Priority' Plan Nets Current, Future Orders

GREENSBURG, Pa.—In less than three weeks $15,000 worth of postwar appliance business and $500 in immediate sales were chalked up by Appliance Sales Co., Westinghouse dealership here, after introduction of the firm's "Electric Appliance Priority Club," a plan originated and copyrighted by B. M. Ratner of the dealership.

Chief purpose of the plan, according to Mr. Ratner, is to keep track of customers who wish to purchase appliances as soon as they become available after the war, so that when the goods arrive those who asked for them first will be given first opportunity to buy.

Two secondary motives of the plan are to encourage floor traffic and resultant sales in goods now on hand, and to build up a list of prospective postwar customers.

Copyrighted features are the name and the priority certificate used. The latter consists of a suitably printed form on which are listed 16 different appliances. To obtain a "priority rating," would-be customers need only sign the certificate, indicating which of the 16 appliances they wish to buy. There is no charge, and no advance payments are accepted.

The cards are filed in order of application, and when a shipment of appliances is received, signers will be notified in that order.

Plans to offer this service to other dealers are being formulated by Mr. Ratner. Included will be two newspaper mats advertising the plan and the priority certificates listing 16 appliances or other items according to the dealer's needs, Mr. Ratner said.

Consolidated Edison Warns Its Users on Old Refrigerators

NEW YORK CITY—Lack of repairmen and repair parts, increasing age of household refrigerators, and hot weather may combine to produce a sudden spurt in electricity or gas bills, consumers here were recently warned by the Consolidated Edison Co.

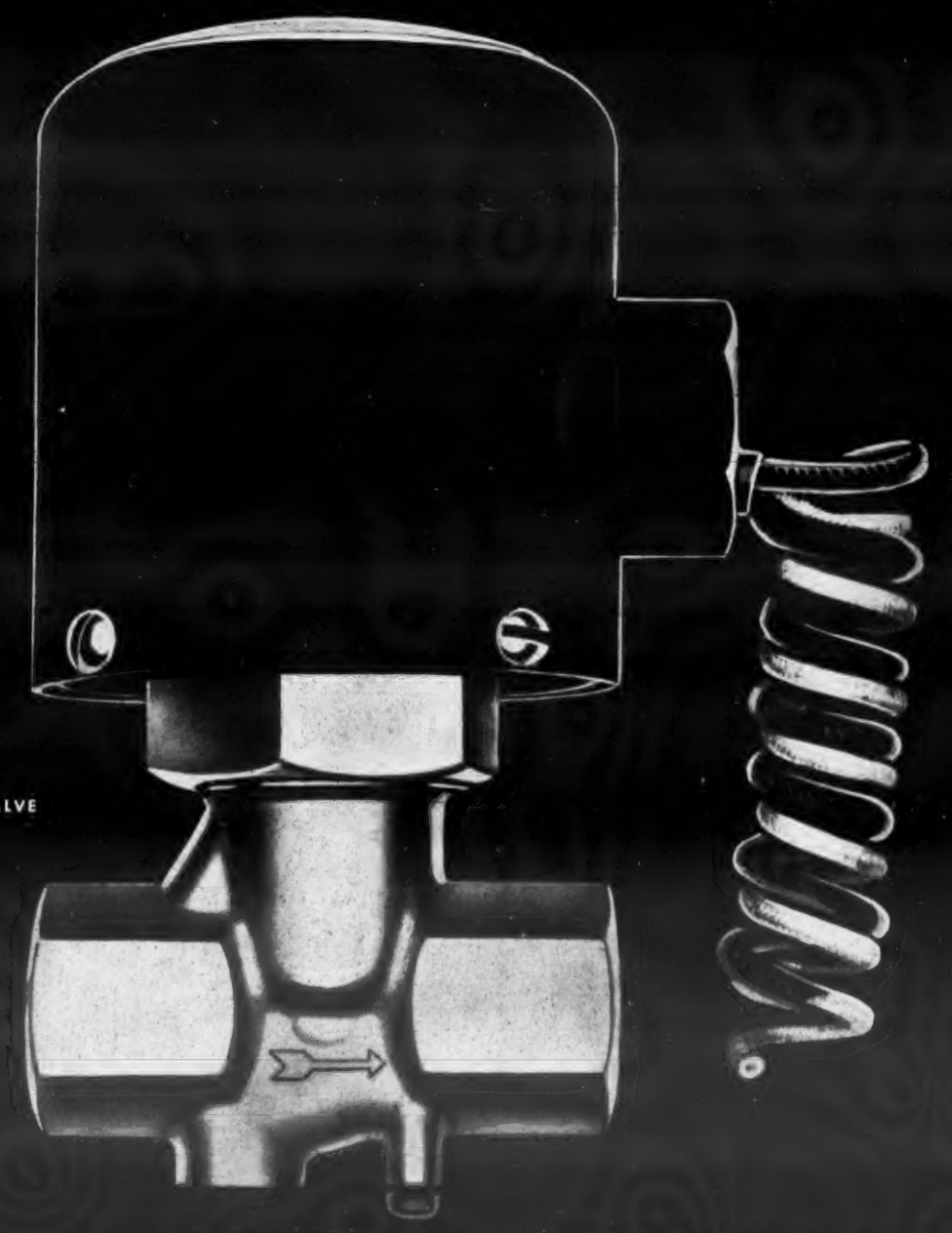
Because no new refrigerators have been made for nearly three years, some 500,000 units, about one-third of those in New York City, are "over-age" and are probably using more electricity, points out the utility.

Shortage of repairmen and parts may mean lengthy delays before an ailing refrigerator can be repaired, and there is no likelihood of new machines coming into the market in the near future, the utility declared in advising consumers to use their refrigerators carefully.

Housewives were advised to open the door as seldom as possible; never let it stand open; check the door gasket by shutting the door on a piece of paper; cool foods before placing them in the refrigerator; defrost when ice is ¼ inch thick; and to call a repairman if the motor runs continually.

Dependability doesn't happen...

IT'S *BUILT INTO* EVERY A-P VALVE



A-P MODEL 73-RJ
SOLENOID REFRIGERANT VALVE

This small, compact solenoid is popular with both manufacturers and service engineers alike, because of its unusual features in design, simple construction, positive, quiet, "trouble-free" operation, and easy inspection.

Adaptable to most commercial refrigeration and portable air conditioning applications, A-P Model 73-RJ is capable of operating at pressure differential of 180 lbs. p. s. i. "Wrap-Seal" coils, water and frost-proof, are "over-powered" for ample lifting power even during reduced voltage and heavy load periods. It can be easily and quickly disassembled for inspection and cleaning *without removing from the line.* Maximum capacity: Liquid line, 7.4 tons Freon at 6 lb. drop; Suction line, ½ ton Freon at 2 lbs.

AUTOMATIC PRODUCTS COMPANY
2450 North Thirty-Second Street • Milwaukee 10, Wisconsin
Export Dept. — 13 East 40th Street, New York 16, N. Y.

DEPENDABLE
REFRIGERANT VALVES
Stocked and Sold by Progressive Refrigeration Jobbers Everywhere —
Recommended and Installed by Leading Refrigeration Service Engineers.

What Manufacturers and Gov't Agencies Do For 'Spot Authorization' of Civilian Goods Production

WASHINGTON, D. C. — The so-called spot authorization procedure, established by Priorities Regulation No. 25, (the fourth reconversion order") provides a method for authorizing civilian production through field offices of the WPB, when labor, facilities, and materials are available and are no longer needed for war or essential civilian production.

"Production will result under the authorizations made by this procedure only when materials and components are available in new supply or in idle and excess inventories. Since new supplies in any appreciable quantity will not be available until the war production program is reduced, the immediate production that will result will come mainly from the use of materials and components in idle and excess inventories.

It is not expected that production will result in any volume until new supplies are made available as a result of cutbacks and terminations of war contracts.

Pursuant to Priorities Regulation 25, a manufacturer can make application under this procedure for permission to resume or increase the production of a civilian product controlled by an L or M order which has been amended or which is listed on a direction to the regulation.

A manufacturer can qualify for application under this procedure only if he has facilities and manpower available to carry out the production. It will be the function of WPB to determine if such facilities can be devoted to the requested production.

The question of whether manpower is available for the requested production is left to the decision of the War Manpower Commission if the plant is located in an area where no Production Urgency Committee exists. If the plant is located in an area where a PUC exists, then the availability of manpower must be approved by both WMC and PUC before authorization to produce may be granted.

HOW APPLICATIONS ARE MADE

As provided in Priorities Regulation 25, applications for authority to produce and for production materials will be made on Form WPB-4000, and filed with a completed Form WPB-3820 (Revised) with the WPB field office for the district in which the applicant's plant is located.

Established Controlled Materials Plan procedure will be followed in that separate applications will be required for product classifications (code), following the listing in the WPB publication "Products and Priorities. Several products within a single product classification may be combined on one WPB-4000 application, but only one product classification may be included on each application.

Form WPB-4000 provides for a showing by the producer of his proposed production schedule; the controlled materials required to support the schedule, segregated into quantities that will be put into production and purchase requirements. Form WPB-3820 (Revised) requires certain manpower information.

Each application should also be accompanied with a transmittal letter answering the questions asked in the instructions and supplyiny other explanatory information.

FIELD OFFICE ASSISTANCE TO MANUFACTURERS IN MAKING APPLICATION

The applicant should determine whether the product he wishes to make is covered by an L or M order that has been amended, or is listed on Direction 1 as scheduled for amendment. If the controlling order is not listed in the direction or has not been amended, the application should not be made.

It should be pointed out that if the applicant makes one of the preferred utility products, contained in a special list accompanying the order, an AA-5 preference rating will be assigned with his production authorization. No preference rating will be assigned for other products.

He should determine what materials and components other than controlled materials he requires to produce the product. The situation with respect to tightness of such items should be investigated by the applicant, particularly if it is generally indicated that the item cannot be obtained with an AA-5 rating in the case of utility products, or no rating in the case of other products.

Higher ratings can be assigned only in the case of exceptional emergencies and all such cases must be approved in Washington, so the applicant must take his chances with no rating or the low rating and buying from idle and excess inventories. He should also determine whether a separate application is required for an allocation or authorization to purchase any of the required materials or components.

In consideration of these points the manufacturer may decide to make application for another product for which he might be more successful in obtaining the required production materials.

Very small quantities of new materials, if any, are now available for allotment. Thus, the applicant should select a product which can be made from materials and components in idle and excess inventories. WPB's Redistribution Division maintains listings of reported surplus materials and will assist applicant in locating specific materials he might need.

It should also be pointed out that applications indicating use of surplus materials will be more favorably considered so he should explain in his transmittal letter the extent to which surplus materials can be used.

For controlled materials, the difference between the quantities he shows "to be put into production" and his "purchase" requirements reflect the amounts he can use from his own inventory or acquire from the idle and excess inventories of others.

If the applicant needs additional tools and equipment, or needs authority to rearrange the equipment in his plant, he should find out what methods and forms for application to do so should be used. Insofar as tools and equipment are concerned he should investigate the procedures under Priorities Regulation No. 24. If construction is involved, the procedures under L-41 should be investigated.

He should explain in his transmittal letter his need for tools and equipment so this can be considered in processing his application. While authorization may not be denied because he needs additional facilities, it is unlikely that allotments of new materials will be made unless he can show he has facilities to put the materials to use.

The applicant must show (1) that he has manpower available for this production without interfering with any other production in the plant or (2) that he has access to manpower that is not required for essential production elsewhere.

He should carefully explain his situation with respect to manpower when he files his WPB-3820 (Revised) and it should be pointed out to him that authorization will be granted only if WPB and WMC determine the use of his labor will not interfere with local or inter-regional efforts to recruit labor.

Advice as to procedures that should be followed can be obtained from WPB field offices.

ASSISTANCE TO MANUFACTURERS BY SWPC

The Smaller War Plants Corp. in its contacts with smaller plants will call attention to this procedure when it is unable to provide for essential production in a plant. SWPC representatives will advise the plant of the conditions under which applications may be made notifying them to contact the WPB field office for advice as to the methods of application.

SCREENING AND CLASSIFYING APPLICATIONS IN FIELD OFFICES

The field office will examine all applications for completeness and accuracy. Field analysts will check each application against Directions to Priorities Regulation 25 which lists those WPB orders from which exemption may be obtained under the spot authorization procedure and against amendments to orders permitting use of Priorities Regulation No. 25.

If the product applied for or the materials to be used is governed by a WPB order that has not been amended to permit application and therefore is not listed in a Direction, the application will be rejected.

The field office will classify all applications into (1) Washington cases, which will be forwarded with field office recommendations to the responsible WPB industry divisions for final action, and (2) field cases, which will be handled entirely by the field office.

Washington cases will be those applications on which the proposed production will require (a) more than 50 production workers in the critical West Coast Areas, (b) more than 100 production workers in Group 1 or Group 2 Labor Areas or (c) more than 250 production workers in Group 3, Group 4, or Unclassified Labor Areas. If the number of workers shown for any one month exceeds the above limits, it will be classified as a Washington case.

The field office will determine whether or not the product is a preferred utility product. The Office of Civilian Requirements in the field office will be consulted in all doubtful cases in making this determination.

REVIEW OF FACILITY INFORMATION

A copy of all the application forms WPB-4000 and WPB-3820 (Revised) and the transmittal letter shall be referred to the Production Service Department of the field office for review and recommendation.

Where the Production Service Department has information previously

(Continued on Page 19, Column 1)

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REVOLUTIONARY
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How Manufacture Will Be Authorized Under 'Reconversion Order' Plans

(Continued from Page 18, Column 5)

obtained regarding the size and nature of the applicant's facilities, and they have otherwise been requested to suggest facilities similar to the applicant's for prodution of a military item they will contact the applicant to determine if he is able and willing to undertake this more important production.

In this investigation the field office will make full use of any information on file in the SWPC local office. Provided arrangements can be completed (contracts or sub-contracts) for the applicant to engage in this production, his WPB-4000 application regardless of classification, should be cancelled.

In accordance with the instructions for filing WPB-4000, the applicant is required to show in his transmittal letter whether he requires any additional facilities, processing machinery, or equipment in his plant in order to carry out the proposed production. If so, he is also asked to show how he proposes to get them. In these cases the Production Service Department should make a recommendation as to whether, in its opinion, the equipment required can be obtained by the applicant by the methods he proposes, or whether other methods should be used.

If it can be determined that the facilities required cannot be obtained, and are required by the applicant before he can make any of his product, the field office may deny the application, subject to reconsideration when such facilities can be acquired. If it is determined that the applicant can produce some or part of the products applied for without the additional facilities, a recommendation should be made as to whether allotments of new materials should be made, or the authorization should be confined to the use of idle and surplus materials. In consideration of individual situations, supplies of new materials will be allotted to applicants who can better utilize them for maximum production.

The Production Service Department will also review the answer in the transmittal letter to the question in the instructions to WPB-4000 regarding the changes that have occurred, or are expected to occur, that makes it possible for the plant to apply.

If it is not clearly shown that changes have occurred, or definitely will occur, in any production now in the plant, a recommendation will be made as to whether authorization of civilian production might interfere with current production in the plant. In making this recommendation, reference should be made to any other information at hand regarding the production in the applicants' plant and it may be necessary to contact Government Procurement Agency representatives and the applicant for additional information regarding his current production. The answer to this question will also indicate the degree to which the plant requires assistance, advice of the regional labor representative or his delegate should be obtained as to this point.

MANPOWER INVESTIGATION

An investigation of the manpower situation must be made in each case regardless of plant size or location.

One copy of Form WPB-3820 (Revised) will be forwarded by the WPB field office to the WMC area office, and a second copy to the Chairman of the Area Production Urgency Committee, where such committees exist, for their information.

The answers supplied by the applicant on Form WPB-3820 will show (a) the number and type of workers to be released if production is not approved; (b) the number of workers to be engaged in the production; (c) where new workers, if any, will be obtained; and (d) the number and type of any additional workers that may be required.

The WMC area representative (preferably the WMC member of the APUC) will certify on WPB-3820 (Revised) whether the required labor, or any portion of it, is available for the requested production without interference with local and inter-regional labor recruiting efforts. This copy of WPB-3820 (Revised), as certified by WMC, will be furnished to the APUC chairman.

Provided the WMC certification, with respect to labor availability, is favorable, the chairman of APUC with the advice of the committee shall determine whether authorization shall be granted. The determination of APUC, signed by the chairman, shall be shown on WPB-3820 (Revised), showing the WMC certification, which shall be sent to the WPB field office.

Where the certification of the WMC with respect to labor availability is unfavorable, the APUC chairman will indicate his concurrence, on the same copy of WPB-3820 (Revised) which shall be sent to the field office which in turn will deny the application.

Where APUC committees have not been established, the WPB field office will perform the APUC function.

Where the determination with respect to labor availability is favorable, authorization of production may be made by either the field office or WPB Industry Division, depending upon the classification of the application as a field case or Washington case. Applications for which the labor availability determination is unfavorable will be denied by the field office.

In the event the required labor is determined to be only partially available, the application will be denied but the applicant will receive instructions to file a new application requesting permission to use the available labor.

AUTHORIZING MANUFACTURE UNDER PROCEDURE

Where it has been determined that labor is available for the proposed production, field office authorization may be granted as follows:

(1) A production schedule in dollars, and also in units if a unit schedule is shown on WPB-4000 will be shown on the authorization form CMPL-150c, equal to the schedule shown by the applicant on his WPB-4000 application.

(2) Allotments of controlled materials may be made, consistent with the size of the reserves available, in order to provide the greatest utilization of the quantities available for allotment. For example, it is more desirable to grant allotments to those applicants who can use large quantities of surplus materials with "fill-in" amounts of new materials, who have facilities immediately available to utilize new materials or who can provide employment for many workers. Also in making allotments, preference will be given to manufacturers applying for authorization to produce preferred utility products.

(3) Production schedules can be authorized without making allotments. Such action permits the manufacturer to acquire and use surplus materials. After an authorization without allotments, the manufacturer may be able to show more specifically his need for new materials on a supplementary application, after he has tested the surplus market.

(4) In no case may allotments be made in excess of the amounts that may be specified by the regional director unless approval is obtained in the manner prescribed by the director. The purpose of this provision is to protect the regional reserve from being quickly used up, since requirements cannot be added up and the available supply divided. Also by establishing such limits more plants can be assured of participating in the reserve. The amounts would be determined based upon the size of the reserve granted to the regional office.

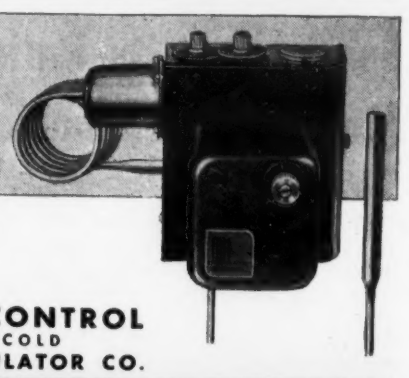
(5) When allotment reserves have been established for advance quarters, allotments for advance quarters will be granted to manufacturers upon request, if they are considered by the field office to be necessary.

Any allotments issued will be accounted for according to instructions which will be issued by the WPB Controller Division.

Authorization form CMPL-150c will show (1) the name of the product, (2) the schedule, and (3) allotments, if any. A preference rating of AA-5 will be assigned if the manufacturer is making OCR products while no preference rating will be assigned for the production of other products. The allotment symbol Z-1 has been assigned by the use of the form.

The authorization Form CHPL-150c and the transmittal letter which will accompany it explain the manufacturer's rights with respect to the acquisition and use of surplus materials. After authorization on either a field or Washington case, the manufacturer may need assistance in locating and buying surplus materials and components. He has been advised to contact the WPB field office which shall refer him to the redistribution division.

(Concluded on Page 20, Column 1)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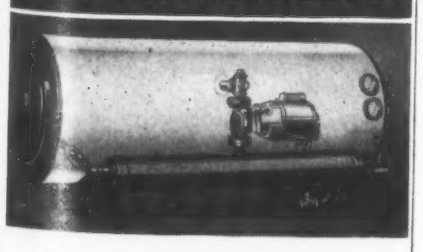

25 to 100 gallon capacities.

Suitable for bakery ingredient, jacket cooling, film processing, air conditioning or other commercial cooling.

Available with or without agitator pumps.

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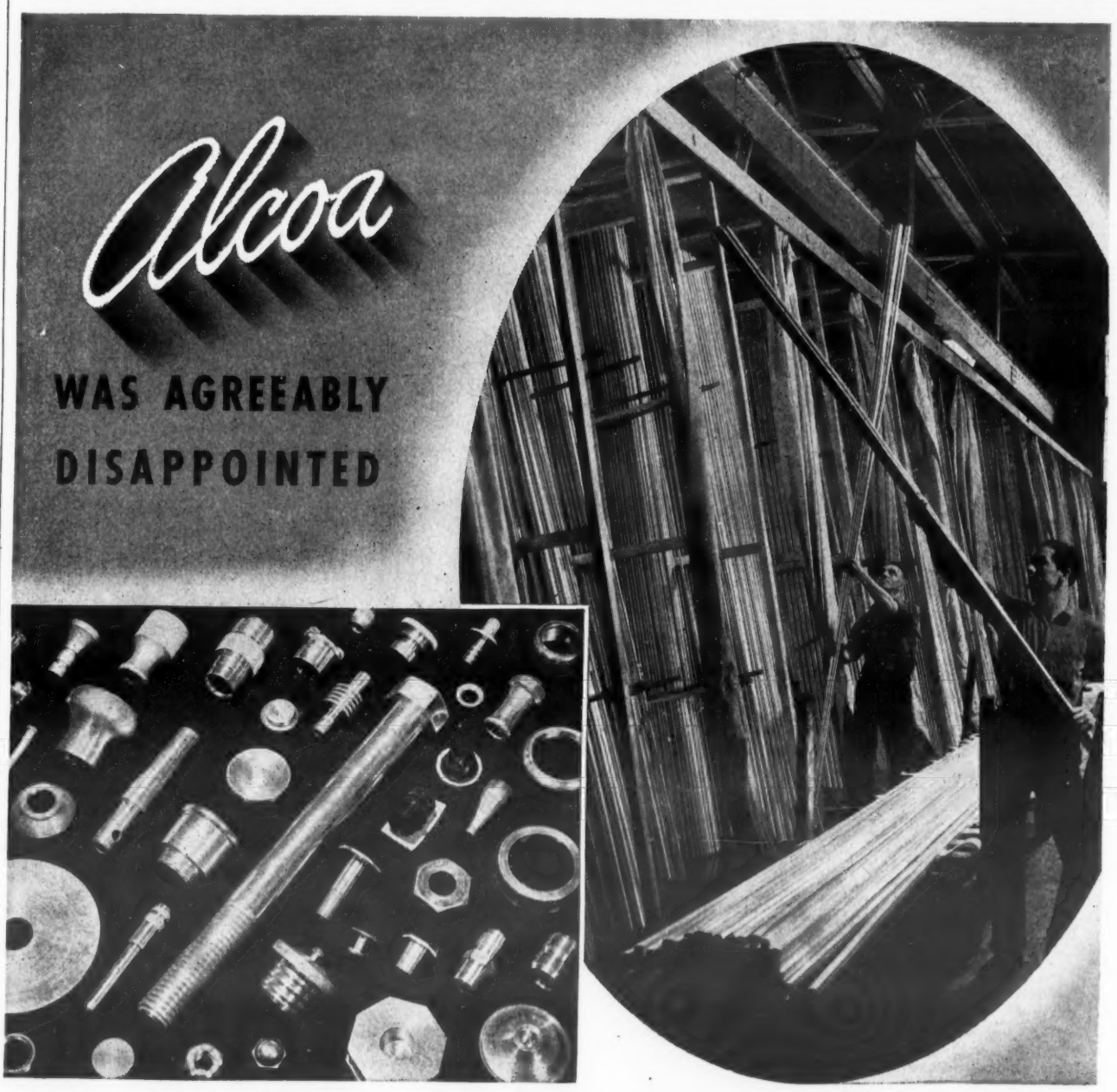

Alcoa Aluminum products for your assembly line or Alcoa stock for your screw machines

With the millions of aluminum screw machine products required at the start of the war, and hundreds of new fabricators coming into the picture, a flood of requests for help was expected. Alcoa had always served as a clearing house where all fabricators could come for information on aluminum alloys, the design of parts and tools, machine speeds, feeds and lubricants. Alcoa's engineers had given freely of their time to help others get into aluminum production.

But the spadework, getting industry ready to swing into aluminum production, had been well done before the war. As a result, a surprisingly small number of requests for help developed.

Alcoa's Screw-Machine-Products Division serves a double purpose. Our skilled personnel manufactures untold millions of pieces for use in the war effort, parts requiring great accuracy. This division serves, too, as a proving ground for new alloys and improved methods of production.

It is Alcoa's intention to continue to aid industry in employing lightweight, strong and fast-machining Alcoa Aluminum Alloys to best advantage.

Winning the war comes first. But, as the manpower situation permits, aluminum is now being used for other-than-war purposes. Our representatives will be glad to discuss the availability of aluminum with you. Write to ALUMINUM COMPANY OF AMERICA, 1975 Gulf Bldg., Pittsburgh 19, Pa.

ALCOA ALUMINUM

Special Priority Ratings For Critical Materials Obtainable In Some Cases

(Concluded from Page 19, Column 1)

The redistribution division will assist the manufacturer in locating and buying the kind and type of materials and components that he requires. If no controlled materials of the type required can be located, the redistribution division may advise the applicant to make a supplementary WPB-4000 application explaining what is required and the efforts made to locate surplus materials.

If components or other than controlled materials are required that cannot be located in surplus and delivery cannot be obtained, the manufacturer may be advised that he can file a letter requesting an uprating for specific quantities of specific items from AA-5 in the case of utility products, or a rating in the case of other products.

CHANGES IN PRODUCTS AUTHORIZED

After authorizations are made, manufacturers may discover that the surplus materials they can locate and buy cannot be used to make the product authorized, but could be used to make another product.

If the manufacturer can make a statement that there will be no change with respect to his manpower situation in making a product other than the one authorized, the field office may permit the change by preparing and issuing a new CMPL-150c showing the new product and schedule. A letter should be sent with the new CMPL-150c cancelling the previous production schedule. In case of emergency the manufacturer may be notified by wire to proceed, sending a revised CMPL-150c for confirmation.

OTHER INTERIM ACTIONS

Supplementary applications on WPB-4000 may be made requesting an increased production schedule or an increased allotment.

An increased production schedule may be authorized provided there is no change in the applicant's manpower situation, or after a favorable manpower finding base upon a newly filed WPB-3820 (Revised).

The real need for allotments probably can be determined better on the basis of interim applications, because the manufacturer will have had time to attempt to locate and buy surplus material. He can explain just how much he needs to continue production and can demonstrate the effect of an allotment denial on his operation. Minimum allotments will be provided (consistent with the size of the reserve) so a manufacturer in such a position can continue to operate.

Requests for an uprating from AA-5 in the case of OCR products, or for a rating in the case of other products, must be confined to requests for specific quantities of specific items, and if favorably recommended by the field office, must be referred to the Special Rating Branch, Washington, D. C., for final action.

Text of Direction No. 1 To Priorities Regulation 25

DIRECTION NO 1 TO PRIORITIES REGULATION 25
WPB Orders Covered by Priorities Regulation 25

Production of products covered by the following WPB orders may be authorized under Priorities Regulation 25. The order should be referred to, since it may still restrict models and types that may be made or materials that may be used, or impose other limitations on the product: from these provisions the regulation will in most cases afford no relief.

I

If one of the following orders is amended to refer to Priorities Regulation 25, authorization under the regulation will affect the provisions of the order only to the extent provided in the amended order.

Until one of the following orders has been specifically amended to provide otherwise, authorizations granted under this regulation will give relief **only** from the provisions of the order which either prohibit manufacture entirely or restrict the amount of manufacture permitted. The authorization will **not** in any way relieve the person receiving it from any other restrictions of the order.

For example, the following types of restrictions must still be complied with: restrictions on the types of models which can be made, on the kind of materials which can be used, on the amount of materials which can be used in producing any unit of the article, on the end uses for which production is permitted, on deliveries of the product, on inventories, etc.

Thus, with respect to an "L" order not amended to provide otherwise, which restricts both (1) the amount of material used in a plant's total production of an article and (2) the amount of material per unit manufactured, relief would be granted under this regulation from the first restriction but not from the second.

AUTOMOTIVE DIVISION

L-80—Outboard Motors and Parts.
L-158—Automotive Replacement Parts.
L-180—Replacement Storage Batteries.
L-270—Automotive Maintenance Equipment.

BUILDING MATERIALS DIVISION

L-205—House Trailers and Expansible Mobile Houses.
L-225—Electrical Conduit, Electrical Metallic Tubing, and Raceways.

CONSUMERS DURABLE GOODS DIVISION

L-5-c—Domestic Mechanical Refrigerators—except electric.
L-6—Domestic Laundry Equipment—except washing machines.
L-7-c—Domestic Ice Refrigerators.
L-13-a—Metal Office and Industrial Furniture and Fixtures.
L-18-b—Domestic Vacuum Cleaners.
L-21-a—Automatic Phonographs, Weighing, Amusement, and Gaming Machines.
L-23-b—Domestic Electric Ranges.
L-27—Vending Machines: Merchandise.
L-28—Incandescent, Flourescent, and Other Electric Discharge Lamps.
L-30-a—Galvanized Ware and Nonmetal Coated Metal Articles.
L-30-b—Enameled Ware.
L-30-c—Cast Iron Ware.
L-30-d—Miscellaneous Cooking Utensils and Other Articles.
L-30-e—Aluminum Cooking Utensils, Kitchen, and Household Ware.
L-33—Portable Electric Lamps and Shades.
L-36—Umbrella Frames.
L-37-a—Musical Instruments.
L-49—Beds, Bed Springs, Mattresses, and Dual Sleeping Equipment.
L-52—Bicycles and Bicycle Parts.
L-62—Metal Household Furniture.
L-65—Electrical Appliances.
L-65-a—Electric Irons.
L-67—Lawn Mowers.
L-71—Dry Cell Batteries and Portable Electric Lights.
L-73—Office Supplies.
L-92—Fishing Tackle.
L-93—Golf Clubs.
L-98—Domestic Sewing Machines.
L-104—Metal Hair Pins and Metal Bob Pins.
L-136—Church Goods.
L-140-a Cutlery.
L-140-b—Flatware and Hollow Ware.
L-176—Domestic and Commercial Electric Fans.
L-227—Fountain Pens and Mechanical Pencils.
L-227-a—Pen Nibs.
L-227-b—Wood Cased Pencils and Pen Holders.
L-267—Photographic and Projection Equipment, Accessories, and Parts.
L-275—Alarm Clocks.
L-301—Powercycles.
L-308—Domestic Food Dehydrators.

FARM MACHINERY DIVISION

L-257—Farm Machinery and Equipment and Attachments and Repair Parts—except tractors.

GENERAL INDUSTRIAL EQUIPMENT DIVISION

L-38—Industrial and Commercial Refrigerating and Air-Conditioning Machinery and Equipment.
L-89—Elevators and Escalators.
L-292—Food Processing Machinery.
L-314—Lubrication Equipment.

GOVERNMENT DIVISION

L-55—Shotguns.

PLUMBING AND HEATING DIVISION

L-23-c—Domestic Cooking Appliances and Domestic Heating Stoves.
L-42—Plumbing and Heating Simplification.
L-74—Oil Burners.
L-75—Coal Stockers.
L-173—Oil and Gas Burning Space Heaters.
L-182—Commercial Cooking and Food and Plate Warming Equipment.
L-185—Water Heaters.
L-187—Cast Iron Boilers.
L-199—Plumbing and Heating Tanks.
L-248—Commercial Dishwaters.

PRINTING AND PUBLSHING DIVISION

L-188—Loose-Leaf Metal Parts and Units.
L-226—Printing and Publishing Machinery, Parts, and Supplies.

RADIO AND RADAR DIVISION

L-151—Domestic Watthour Meters.

SAFETY AND TECHNICAL EQUIPMENT DIVISION

L-39—Fire Protective, Signal and Alarm Equipment.
L-238—Sun Glasses.

SERVICE EQUIPMENT DIVISION

L-29—Metal Signs.
L-54-a—Typewriters.
L-54-c—Office Machinery.
L-91—Commercial Laundry Equipment, Dry Cleaning Equipment, and Tailor's Pressing Equipment.
L-190—Scales, Balances, and Weights.
L-222—Floor Machines, Rug-Scrubbing Machines, Industrial Vacuum Cleaners and Blowers for Cleaning Purposes.
L-325—35 mm. Motion Picture Projection Equipment and Accessories.

TEXTILES BUREAU

L-68—Closures and Associated Items.

TOOLS DIVISION

L-201—Automotive Tire Chains, Tractor Tire Chains and Chain Parts.

COMMUNICATIONS DIVISION

U-8—Order Limiting the Manufacture of Telephones.

COPPER DIVISION

M-9-c-1—Copper and Copper Base Alloy Shoe Findings.
M-9-c-3—Copper.

II

Until one of the following orders is amended to refer to Priorities Regulation 25, an authorization granted under the regulation will permit the use of the material controlled by the order for the purpose authorized. Other restrictions such as those on delivery, inventory, etc., will not be affected. If such order is amended, the authorization will grant relief to the extent provided in the amendment.

Certain other orders of the War Production Board contain restrictions on the use of material controlled by the following orders. Whether or not the order listed below has been amended, these restrictions remain in effect and an authorization granted under Priorities Regulation 25 will not operate to waive any such restrictions unless the other order (usually an "L" order), or this or another Direction to Priorities Regulation 25 provides otherwise .

ALUMINUM AND MAGNESIUM DIVISION

M-1-k—Aluminum.
M-2-b—Magnesium.

COPPER DIVISION

M-9-c—Copper.

MISCELLANEOUS MINERALS DIVISION

M-146—Quartz Crystals.

STEEL DIVISION

M-126—Iron and Steel Conservation—except gasoline pumps.

TIN AND LEAD DIVISION

M-38—Lead (Except Item 11a in List A—Foil for packaging).

ZINC DIVISION

M-11-b—Zinc.

Issued this 15th day of August, 1944.

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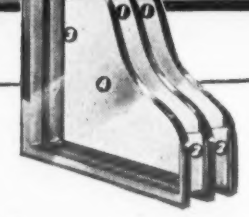

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4. **ONLY TWO SURFACES TO CLEAN.** The glass surfaces inside a unit are specially cleaned at the factory... and stay clean!

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In every field where goods are sold, "Buyer Selection" is important. In the frozen and refrigerated food field, this principle will be doubly important when peace returns.

If you're planning your postwar cases, investigate the benefits of Libbey·Owens·Ford Glass Company's THERMOPANE—*the insulating glass unit with Clear Vision.*

THERMOPANE has proved its value in thousands of food cases ... in faster turnover and more profit—per case ... for it enables the buyer *to see what she wants.* This is "Buyer Selection"—the same principle used by large department stores ... a principle not possible with "Blind Top" food cases.

Add this extra sales punch to *your* food cases with THERMOPANE. You can get full information by writing Libbey·Owens·Ford Glass Company, 6084 Nicholas Building, Toledo 3, Ohio.

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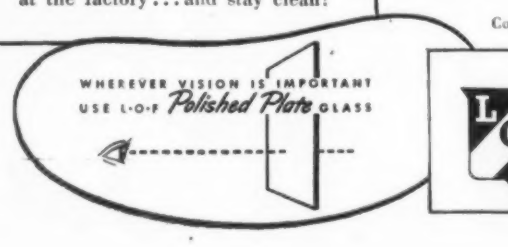

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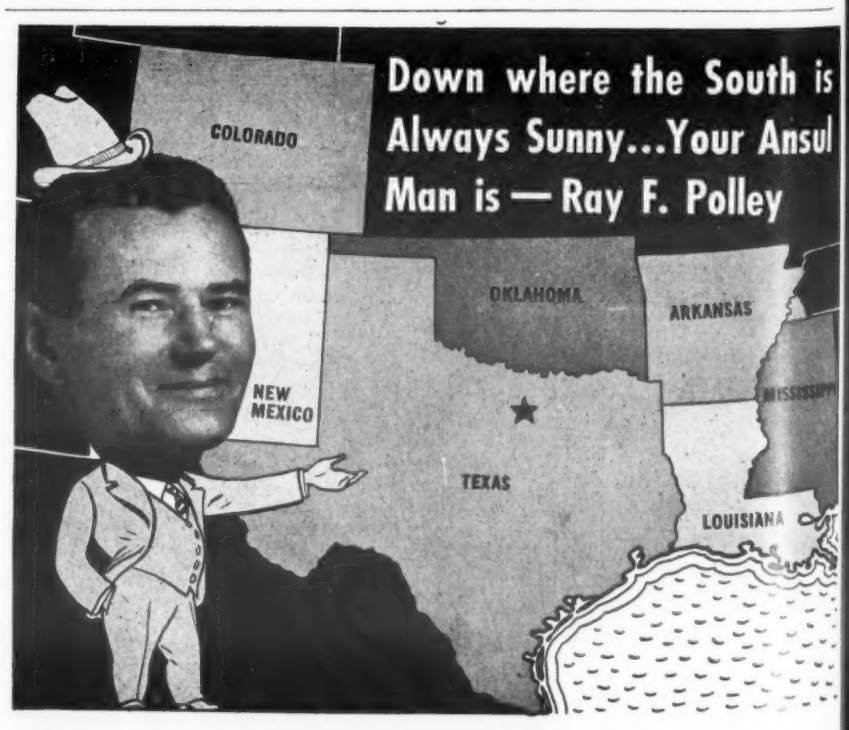

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If you're in this great southwestern territory, depend on Mr. Polley whenever you need Ansul service—*fast!* His office is at 1010 Jennings, Fort Worth, Texas.

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Orders Filled the Day Received

AC-48A

TWENTY-NINE YEARS OF KNOWING HOW

Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Flash Gas

(This is the second of two articles)

PRESSURE DROP DUE TO WEIGHT OF THE LIQUID

In the above we have considered the pressure drop in the liquid line due only to the frictional or restrictive effect of the tubing and fittings. There is another cause of pressure drop: the weight of the liquid causing a loss in pressure if it is necessary to lift the liquid.

This is a factor that can be disregarded if the evaporator is but a few feet above the condensing unit, but can be a very important factor if the condensing unit is in the basement and the evaporator is on an upper floor. Such installations are sometimes encountered in air conditioning, water cooling, or apartment house installations.

Let us take, for example, a water-cooled condensing unit in a basement connected to an evaporator on the second floor requiring a 30 foot vertical rise in the liquid and suction lines. The condensing water is 65° and the water control valve is regulated to maintain an 100 p.s.i. condensing (discharge) pressure. By the time the liquid gets up to the evaporator it has become 80° F. The saturation pressure corresponding to 80° F. is 84.1 p.s.i., so there must be no more than 16 p.s.i. (100-84) pressure drop in the liquid line, for if the pressure at the top end goes below the 84.1 p.s.i., the liquid will boil and flash gas will form.

Let's assume that the average temperature of the liquid from the machine in the basement to the inlet to the expansion valve is 76° F. "Freon-12" at 76° F. weighs 81.87 pounds per cubic foot, so for each lineal foot rise of the liquid line there would be a pressure drop on one square inch of .57 pounds (81.87 ÷ 144) or, saying it another way, there would be a pressure drop of .57 p.s.i. for each lineal foot of rise of the liquid line. Then for the 30 foot rise there would be a pressure drop, due to the weight of the liquid alone, of 17.1 p.s.i. which is over the allowable 16 p.s.i.

In addition there would be some pressure drop due to friction so in all there would probably be about 20 p.s.i. pressure drop; that is, the liquid pressure at the top of the liquid line would be about 80 p.s.i. (100-20), and since this is 4.1 p.s.i. less than the 84.1 p.s.i. saturation pressure corresponding to 80°, there would be boiling, and flash gas would form.

ONE REMEDY

In this case the remedy would be easy; simply readjust the water control valve to maintain 105 p.s.i., or greater, which would keep the pressure on the liquid 85 p.s.i. at the top of the liquid line instead of 80, so that in spite of the 20 p.s.i. pressure drop the pressure on the liquid at the top of the liquid line would still be above the saturation pressure, and there would be no boiling and no flash gas.

The above figures are based on 80° F. liquid, but suppose that the liquid line passes by a hot water heater or other source of heat and that it is warmed to **100° F.** instead of 80°. Then flash gas would form even with the water valve set for 105 p.s.i., for the saturation pressure corresponding to 100° F. is 116.9 p.s.i. —32 p.s.i. **above** the 85 p.s.i. pressure in the liquid line at the top. To be above the 116.9 p.s.i. at 100° we would have to set the water valve to start the liquid out from the condensing unit at a pressure of more than 137 p.s.i. (117 plus the pressure drop of 20 p.s.i.)

HIGH HEAD PRESSURE COSTLY

It would be objectionable to do this for this much increase in head pressure would considerably decrease the refrigerating capacity of the unit and would increase the percentage of running time, and would also increase the wattage to the motor, thus increasing the cost of operation and of maintenance.

COOLING THE LIQUID

Instead of increasing the head pressure to overcome the effect of the heating of the liquid by the water heater, it would be better (1) to move the liquid line or the water heater, or insulate between them, or if this could not be done to (2) cool the liquid by means of a heat exchanger, utilizing cooling effect by the suction line which would otherwise be wasted.

The formation of flash gas is accelerated by increase of pressure drop in the liquid line or by rise in temperature of the liquid—whatever the cause of either; it is lessened by reduction in pressure drop or by cooling the liquid.

Cool liquid to the expansion valve is desirable from another angle in that it requires that less of the cooling effect of the liquid be used just to cool the liquid itself down from its temperature in the liquid line to the temperature of the liquid and vapor in the evaporator. This part of the liquid is "wasted" and is simply converted into flash gas within the evaporator. (See article in Oct. 25, 1943 issue for further details.) In many cases the heat exchanger is unable to sufficiently cool the liquid for there is not always enough "spare" refrigerating effect in the suction vapor.

In former years, when apartment house multiple installations were more numerous than at present, it sometimes occurred that difficulty was experienced in getting the evaporators on the top floors to refrigerate at all.

For example, the pressure drop between the basement and the tenth floor, a distance of 120 feet, would be approximately 80 p.s.i. due to the weight of the liquid and frictional loss. It took a head pressure of over 80 p.s.i. to get any liquid at all to the top evaporator, but even with a head pressure at the machine of 150 p.s.i. there would be considerable flash gas at apartment temperatures of over 70° and consequently enough reduction in the efficiency of the evaporator and expansion valve to materially affect the refrigerator temperature and the freezing of ice cubes.

It is not always practical to avoid flash gas; in many instances the machine must be put in the basement and the evaporator several floors above; long runs cannot always be avoided. But it is desirable to remove the flash gas; i.e., keep it from going through the expansion valve and keep it out of the evaporator.

Fig. 1 shows a method of automatically taking the flash gas as it forms in the liquid line and purging it over into the suction line, thus bypassing the evaporator. This method is not a cure-all, for the flash gas does little useful work (it tends to cool the liquid some) and throws additional work on the compressor and condenser, but at least the expansion valve and evaporator can be relieved of its undesirable effects.

FLOAT SWITCH METHOD

If flash gas starts to form it gathers in the top of the auxiliary liquid chamber and as its pressure increases, the liquid level starts to drop toward the dotted line. A drop in liquid level causes the float switch to make contact. The solenoid valve opens and the flash gas is permitted to purge through the by-pass line and, as this reduces the pressure, the liquid level rises in the auxiliary chamber and the float switch opens, closing the solenoid. The equipment then runs normally until there is need again to purge off the flash gas back to the suction line.

The hand valve in the by-pass line may be adjusted to regulate the frequency and duration of purging. On installations having very long vertical liquid lines it may be necessary to set the hand valve to purge as much as ¼ to ⅓ of the time that the condensing unit is operating. Do not use too small a by-pass line for the volume of flash gas may be large.

The by-pass line should be at least ½ as large (in cross section) as the hot gas line from the compressor to the condenser. Take the current supply from the line to the motor on the condensing unit, after the starter or control, the solenoid in parallel with the motor), so that the purge solenoid is open only during condensing unit operation; otherwise there may be trouble in starting the condensing unit due to high suction pressure and/or "slugging" excess refrigerant in the suction line and in the crankcase of the compressor.

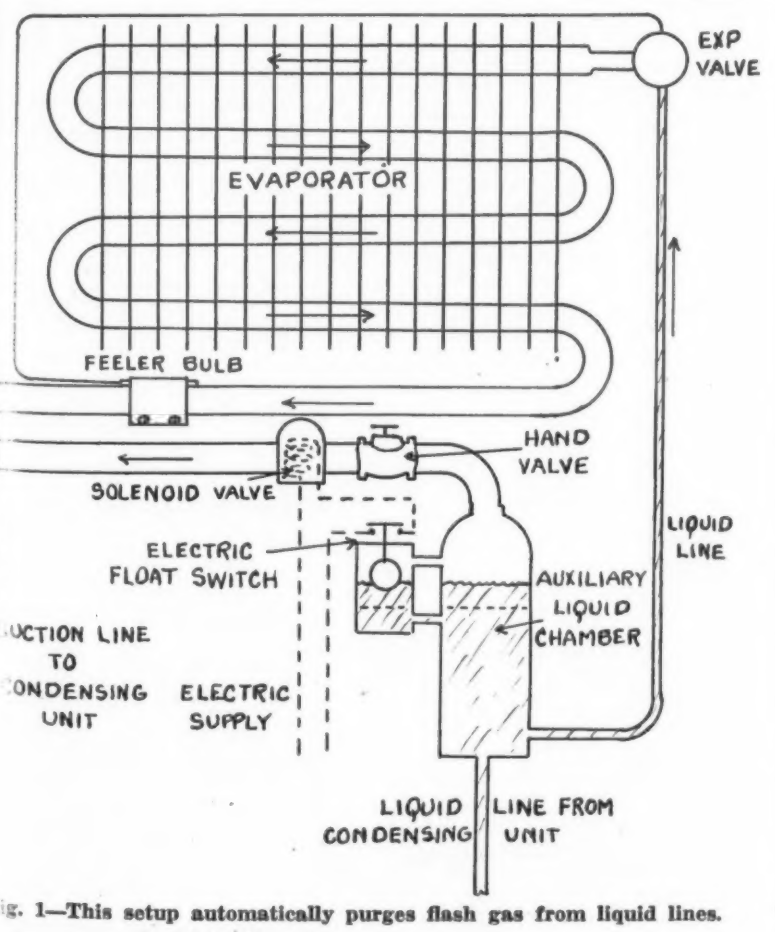

Fig. 1—This setup automatically purges flash gas from liquid lines.

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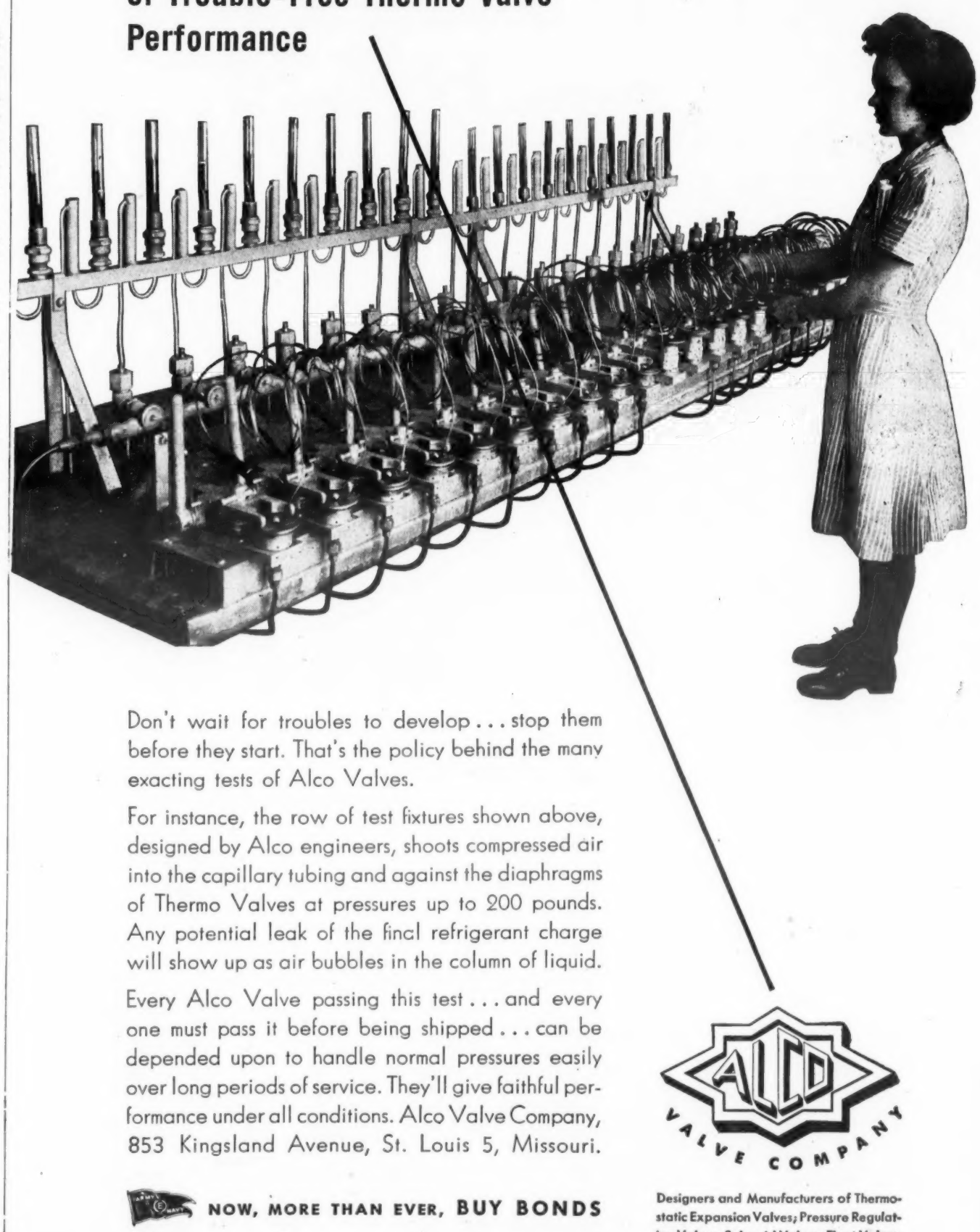

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What Happens When Just One Commercial Service Firm Goes Down For The Count

Their War Plant Servicing Touches Tank Parts, Precision Gages, Aircraft Instruments

Editor's Note: Public recognition of the need for refrigeration servicemen on the home front has been fought for by the industry ever since Selective Service began to pull their number down below essential maintenance levels.

It happened again recently—a commercial refrigeration service firm saw the last of its trained men called off to war, leaving the company with not only a heavy roll call of restaurants and food markets, but also with low-temperature maintenance commitments in a number of vital industrial installations.

The NEWS went to these plants to get a picture of what part refrigeration was taking in their production, and what significance the breakdown of a single refrigeration outlet might have on the war effort in Detroit. The results are given in the story below.

Charles Landrith is owner and manager of Superior Refrigeration Sales & Service, at 3900 Sixteenth St., Detroit. His firm is distributor for one line of commercial equipment, and its servicing activity has regularly been extended to some 2,200 commercial accounts throughout the city.

Since last November, 1943, he has lost four fully trained refrigeration servicemen to the armed forces. Two of them were his sons. The last of the four, who was now the last of his trained men, received his Selective Service notice in July and left for induction the first of this month.

The score now reads: one partially trained serviceman, 2,200 commercial accounts depending upon the company for service, 80% of them cafes and food markets, with a number of important low-temperature defense plant installations among those remaining.

During the past three months, more than 500 calls for servicing have been phoned in, and have had to be turned down because there wasn't even a hope of getting to them. This was before the firm's last trained man had left.

Servicing facilities in this city have been critically short for many months (Survey reported in the NEWS, Mar. 13). There is little hope of other firms being able to take up the slack. They are having manpower troubles of their own.

Taking Landrith's firm as an example, what kind of essential processes are jeopardized when a servicing company finds itself unable to deliver the technical help they are depending on? Here are some of the essential industrial installations that called in during the past month:

International Detrola Corp.
Detrola Radio Div.
1501 Beard St.
Detroit 9, Mich.

Refrigeration is used at Detrola for the subzero testing of various delicate instruments used by the Army and Navy. There are two low-temperature cabinets, built to reproduce extremes of cold, heat, and for one of them, of vacuum pressure.

Requirements on one type of instrument (identity censored) call for its subjection to 149° F. at 95% relative humidity, then down to 69° below zero for a holding period of 12 hours in a static condition. It is finally tested under running conditions at —26° F.

Another instrument, the Army's FM signal generator, is held at —40° F. for eight hours, then boosted to 140° F., relative humidity 90%. Meanwhile a thermocouple within the instrument measures interior temperatures against dewpoint precipitation.

Most of the parts going into these assemblies pass Army and Navy tests before coming in, but the finished assembly requires the final operating tests described above. There is no substitute. The dynamotors that power the signal generator must pass starting tests at —40 °F. The electrical relays used must pass similar requirements. Without these proofs the military just doesn't accept the equipment. And the testing cabinets are in constant use.

Greenfield Tap & Die Corp.
5850 Second Ave.
Detroit 2, Mich.

Here refrigerating units are used on each of six Jones & Lamson thread grinders, machines which cut external threads on the taps used by Naval prime contractors for cutting internal threads, in turn, into machinery blocks.

A level of about 40 gallons of cutting oil is maintained in each machine, held at 68-72° F. and kept flowing over the cutting wheel as it turns against the tool steel being worked.

Without the cooling action of the refrigerated oil, temperatures in cutting tools and tool steel rise sometimes to 100° F., then fall again during operation intervals.

Actual temperatures reached during the high-speed machining are not so dangerous as the width of temperature variation, since the dimensions of the metal will change proportionately.

Where tolerances within five ten-thousandths are required, the cooling effect of cutting oil at room temperature is not stable enough to hold the steel's dimensions within these limits. And after an hour's consistent running, the temperature of the recirculated oil itself begins to rise.

Held under refrigeration, the temperature of the coolant oil, and of the cutting tool and the steel being worked, is a constant that can be maintained regardless of room temperature variation, interrupted operation, or the increasing heat generated by uninterrupted operation.

Tolerances required sometimes go down to 20 millionths, or one twentieth of the fairly standard requirement above. Here the need for the most exact control is absolute, and refrigeration more than ever is a necessity.

A practical advantage figuring in the operation itself, as apart from the job requirements, occurs in cutting wheel preservation. Heat draws temper from the cutting steel, shortening its life. And high-temper steel now is hard to replace under any circumstances, regardless of cost.

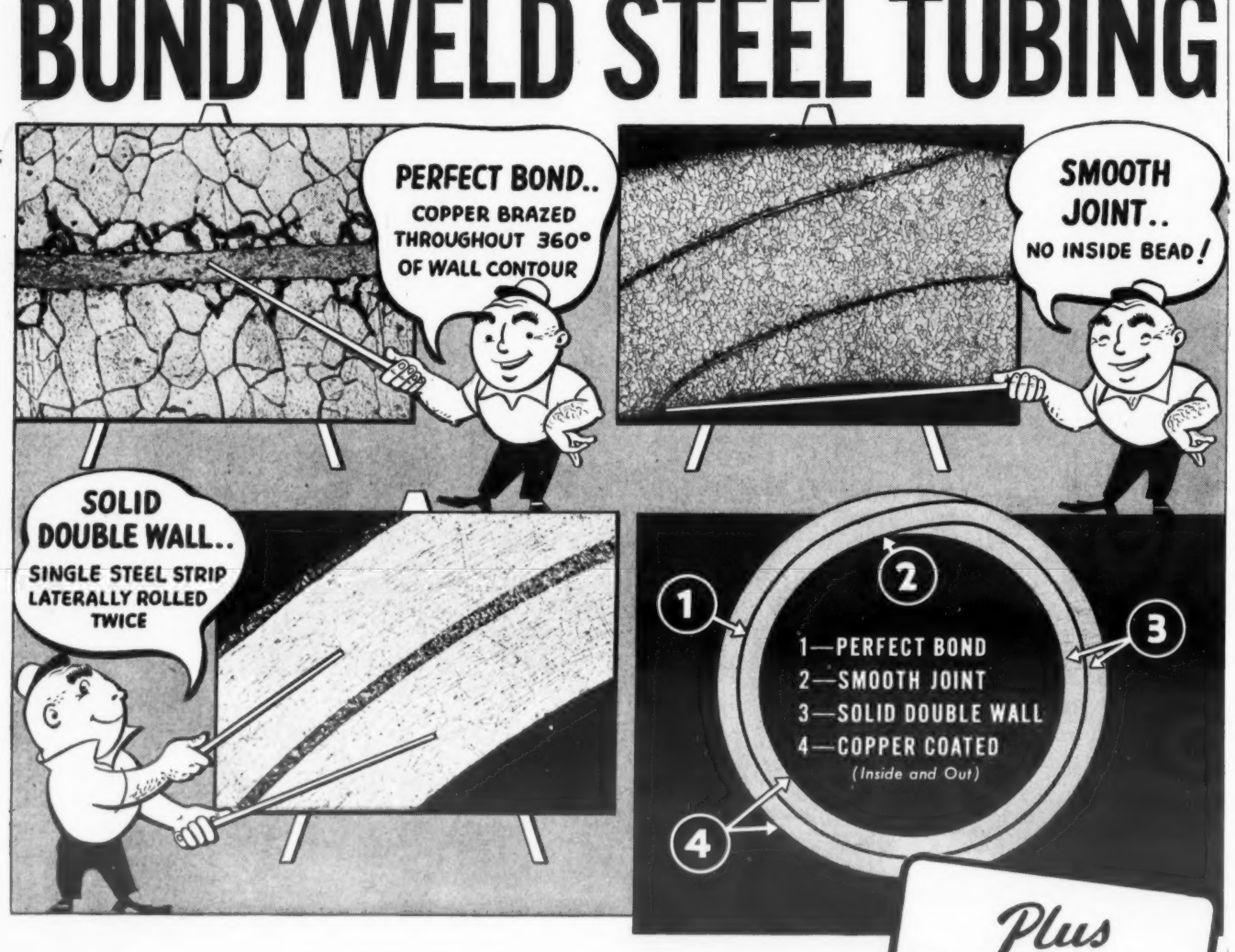
The units used are 250 highside, 150 lowside, two of them powered by ¾-hp. and the other four by 1-hp. motors. Cutting oil volume averages 40 gallons to each grinder, held at 68-72° F. during operation.

Don Gage Co.
5680 Twelfth St.
Detroit 8, Mich.

(Concluded on Page 23, Column 1)

Hidden Superiority Proved by Photomicrographs

BUNDYWELD STEEL TUBING



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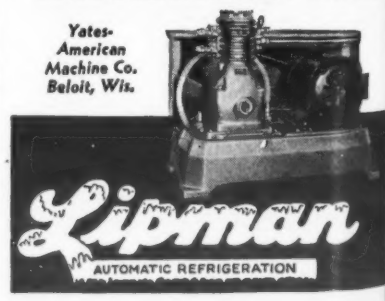
Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION
Yates-American Machine Co. Beloit, Wis.



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NEW 1944 CATALOG

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Washing Machine Parts Catalog will not be issued in 1944

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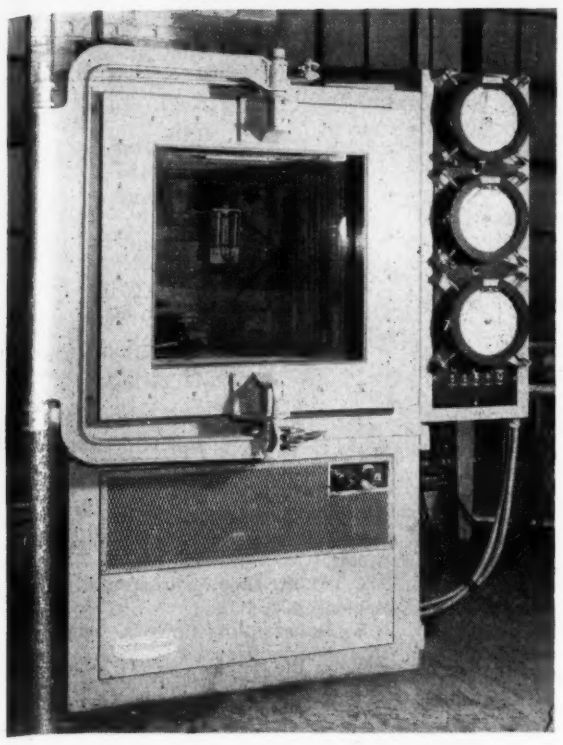
Type of Vital War Plant Installations That Are Affected By Draft of Repairmen



This subzero cabinet, reproducing extremes also of pressure, heat, and humidity, subjects various instruments and materials to weather conditions that must be met on the farthest fighting fronts and in the stratosphere. Indicators on the right record, in descending order, the pressure, dry bulb, and wet bulb readings. Underneath is a 7½-hp. three-phase motor.

* * *

(Concluded from Page 22, Column 5)

Refrigeration here is used in the final steps of gage production. "Green" steel enters the last phases of processing with internal stresses still pent up. These must be normalized against later warpage or "growing" that would throw the gages out of line in their jobs of measuring specifications on close detail work.

Normalizing can be effected by extremely high temperatures, as by immersion in boiling oil, or by extremely low temperatures, which means storage under subzero refrigeration.

The latter method is more generally used. Holding the gage steel literally freezes any further growth, and yet allows the stress to work itself off and the steel to re-attain molecular balance. Exactly how it works isn't clear, but the results can't be argued away, and low temperature does the trick.

The equipment used is a top-lift cabinet held at 40-50° below zero, with 2-3 ft. capacity and a 1-hp. motor.

General Motors Corp.
Research Laboratories Div.
485 West Milwaukee St.
Detroit 2, Mich.

Here, as part of extensive testing operations on aircraft and automotive parts, various materials such as plastics, metal, synthetic and non-synthetic rubber, and coated fabrics, all of which become brittle under conditions of extreme cold, are put to the test of temperatures as low as —70° F.

The manufacturer is not told whether the materials he turns out are going to North Africa, to Alaska, or to the stratosphere. Later, at Army modification centers, general area destinations may be indicated and a few changes made in light of the job to be done.

But the manufacturer must anticipate the complete circle, from 140 above to 70 below and back. The emphasis on testing, from his end, is on individual parts and procedures as early along the production line as possible. It saves a lot of detective work later, plus all the time that goes into an eventually discarded part, from the time it is made up to the time the entire assembly it is part of fails to make the grade.

The box used for the subzero testing has an approximate 8-cu.-ft. capacity, powered by a 22½-hp. motor. Like those described in the preceding instances, it is in constant operation. Its breakdown would be a serious check to the production of its department.

Detroit Metal Spinning Co.
625 Monroe St.
Detroit 26, Mich.

Refrigeration units on seven Jones & Lamson thread grinding machines here do the same job as those described at Greenfield Tap & Die, but this time the machines make valve seats for the Rolls Royce airplane motors that come out of Detroit factories.

The shop is working also toward using cooled oil in turning out stainless steel valve seats. Stainless steel chips don't settle into a cold oil, but remain in suspension.

They will settle in warm oil—but cold oil is as great a contributant in machining stainless steel as it is in working the various tool steels. Again, consistency rather than low temperature itself is the desired factor.

Precision in close-tolerance threading has been so well advanced under automatically-controlled machinery now in use that holding constant temperatures in the steel being worked is the final step in a highly specialized mechanical procedure.

The great time-consuming part of the work is setting up the job—figuring out the number of minutes each step must run considering the toughness of the steel, the depth of the thread, the speed and bite of the cutting wheel, and translating these into so many millimeters on the steel to be cut. It takes from two to five hours.

Once the job is set in motion, if controlling forces such as refrigeration can be applied to variable factors, holding them steady, production goes ahead under free rein.

Chrysler Corp.
Chrysler Div.
12200 East Jefferson Ave.
Detroit 14, Mich.

The refrigeration application here again is small in scope but vital in effect. The cooling unit is used with the thread-grinding machine turning out the single plug used on each tank to seal the hydraulic cylinder cushioning the gun recoil.

One machine only—and one more at Chrysler's DeSoto plant on Wyoming. But each of these holds the complete responsibility for the o[illegible] n a tank that no other machine in the plant can supply.

To make it a little tougher, each of these two machines is on a 24-hour schedule, three shifts a day. What happens to production flow if one of them slows down, or breaks down?

That makes six war plants, and that doesn't cover all of them—there are several more, plus a big restaurant feeding a whole housing project full of war workers and more than a thousand little restaurants and food markets feeding others in their own neighborhoods.

And of course Charley Landrith's company isn't the only refrigeration servicing outfit with these troubles. If it were, some other firm could pinch hit long enough to take care of at least the more important calls.

But this is just one company out of more than 200 in this city, shorthanded, trying to do a job, and still losing men to the armed forces.

Frostode Products Moves To Larger Plant

DETROIT—Increased demands for its industrial refrigeration products has forced Frostode Products to move its plant to larger quarters at 19929 Exeter St. here, the company announces.

The firm produces a line of refrigerated welding units, including resistance welding electrodes and coolant coolers, as well as low temperature cabinets and cold treating equipment.

ARMY E NAVY

"BIRD - IN - HAND" FORMULA

Post war visionaries would change the world over night. But Merchant & Evans Company, like other responsible manufacturers, will risk being called "conservative" by refusing to release untried, unproven mechanical changes just because they are new—or revolutionary. M & E's strong position as a maker of quality compressors has been built on the principle of 'time and test' before sale to the public.

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Conserve Irreplaceable Gas
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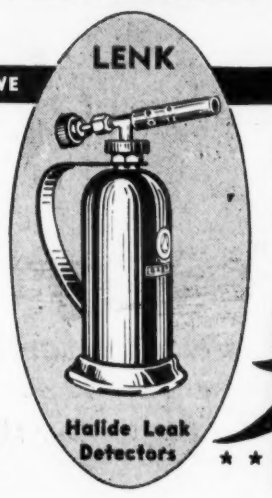

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These new condensing units will give you the most complete, up-to-the-minute line on the market. Backed by Servel's twenty-year reputation for dependability and achievement, they'll help you increase sales in your present markets, give you a head start in developing new ones.

You'll be building on a sound basis, too, for you won't have to worry about "loss-leader" competition. Servel's policy of selling only to regularly franchised distributors and dealers and responsible private brand manufacturers protects your profits. They're worth-while profits, too, for Servel's liberal discounts allow ample margins for sales, service and engineering.

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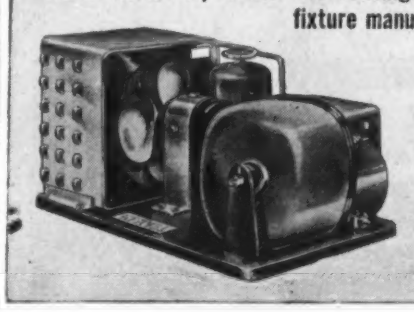
*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field



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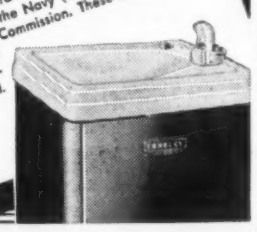

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Safety Habits and Protective Measures For Refrigeration Repairmen Are Outlined

Editor's Note: The Philadelphia Regional Office of the WPB Office of Civilian Requirements, in cooperation with the Electrical Association of Philadelphia earlier this year made a study on "What It Takes To Be a Refrigerator Repairman." Part of this report was published in the July 17 and 31 issues of the NEWS. One of the parts not published was that on necessary safety measures, which we now publish for the benefit of those in service work.

GENERAL SAFETY HINTS

1. When performing service work, disconnect the refrigeration equipment from the electrical current.
2. Always use proper size fuse, fusetron or heater element in electrical circuit.
3. Properly insulate and make all electrical connections secure.
4. Use proper tools and proper size wrenches.
5. Do not exert excessive pressure when tightening flare tube connections.
6. When working with or handling refrigerants, always wear approved goggles to prevent possible injury to the eyes.
7. Under no circumstances apply heat to a refrigerant cylinder containing refrigerant, with a prestolite torch, blow torch, electric stove, gas stove, or any other heating device, over which you have no control of temperature. Should it be necessary to apply heat to a refrigerant cylinder, use a shallow vessel containing tap or lukewarm water, or apply cloths which have been heated in hot water.

As a further precautionary measure, attach a pressure gauge to the cylinder.

8. Always replace refrigerant cylinder valve cap after using cylinder.
9. Before breaking any refrigerant connections, loosen slightly to be sure refrigerant in its liquid state is not present.
10. Never permit a refrigerant cylinder to be dropped, or to strike another drum violently.
11. Do not spill or allow oil to remain on the floor. It may cause you or the customer to fall.

FIRST AID DIRECTIONS

While Sulphur Dioxide and Methyl Chloride are safe refrigerants, accidental spillage of them on the clothing or body of a person may result in serious consequences if immediate remedies are not applied. The damage from accidental spillage is not so much from the physiological effects but from the freezing action. The following first aid directions for accidents should be followed:

LIQUID

a. ON THE SURFACE OF THE SKIN

1. Apply water liberally to the affected part.
2. Dry the skin with a dry towel or cloth.
3. Apply olive oil or sweet oil. If these are not available, apply unused refrigerant oil.

b. ON CLOTHING IN FRONT OF WEARER

1. Remove the person affected to fresh air.
2. Lay the person on his back so that the gas will not rise to the face and be breathed.
3. Remove the clothing.

c. CLOTHING SATURATED SO THAT REFRIGERANT PENETRATES TO THE SKIN

1. Apply liberal quantities of water by means of a hose, pail or other suitable means to absorb the refrigerant, retard rapid evaporation and prevent freezing of the flesh.
2. Remove the clothing.
3. Dry the skin with a dry towel or cloth.
4. Apply oil as in (a).

d. SPLASHED IN THE EYES

1. Lay the head back and pour water in the eyes, holding the eyelids open.
2. Place two drops of sweet oil or prime castor oil in each eye.
3. Wash the eyes with a 4% solution of boric acid or a 2% salt water solution.

e. SWALLOWING

1. Dissolve one teaspoon of bicarbonate of soda (baking soda) in a half glass of water and swallow immediately.
2. Follow with a teaspoonful of sweet oil or olive oil.

GAS

Overcome.

1. Remove the person affected to fresh air.
2. Bathe the face and head freely with cold water.

IN ALL CASES CALL A PHYSICIAN WITHOUT DELAY.

SULPHUR DIOXIDE SO_2 PRECAUTIONS

1. Have a suitable gas mask available at all times when handling or working with SO_2 refrigerant.
2. Never attempt to work in an atmosphere where SO_2 is present unless you are wearing a suitable gas mask.
3. Have the gas mask checked periodically.
4. Never allow flowers, pets or disinterested persons to be present where there is a possibility of an SO_2 refrigerant leak. In all cases provide adequate ventilation and never discharge SO_2 refrigerant into the open air, as its contact with vegetation causes serious damage.

METHYL CHLORIDE CH_3Cl PRECAUTIONS

1. Never discharge Methyl Chloride into a space where there is an open flame.
2. In case it is necessary to work in a space where there may be an appreciable concentration of Methyl Chloride always wear a suitable gas mask.

'FREON-12' CCL_2F_2 PRECAUTIONS

1. Never discharge Freon-12 into a space where there is an open flame.

TRANSPORTATION OF REFRIGERANT

Transportation of Refrigerants.

1. In Maintenance Car: Do not carry a refrigerant cylinder at any time in the passenger compartment.
2. Do not allow the direct rays of the sun to strike a charged or partially charged cylinder over long periods of time.

You'll do faster flaring with a SLIP-ON YOKE!

The No. 195-F Imperial Flaring Tool with the Slip-on Yoke has made a great hit with refrigeration men everywhere.

The illustrations show how easy it is to use. The yoke is made so that it slips right over the bar instantly without twisting or turning. Inside edges of the yoke are slotted so that once in position a slight turn holds it in place.

If you haven't used one you will be surprised how this improvement speeds up flaring.

The No. 195-F Flaring Tool makes correct 45° flares on 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. soft copper, brass or aluminum tubing to make up leakproof SAE flare joints.

If your Jobber cannot supply you with one of these flaring tools from stock he can secure it for you in a short time.

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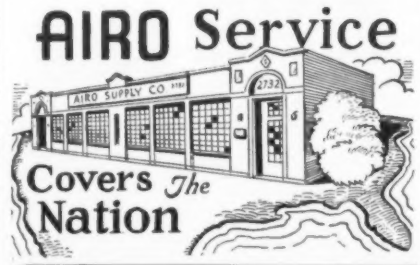

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Refrigerants have gone to war — are high on the list of vital materials. Don't let hidden leaks waste them.

VISOLEAK is composed of fine refrigerant oils colored and treated to penetrate every nook and cranny of the system, keeping a constant check for annoying, expensive hard-to-find leaks.

If refrigerant can leak out, so can ***VISOLEAK*** and it will mark the leak with a dark red stain.

VISOLEAK is safe—safe with any refrigerant and effective with systems of all types. It is non-toxic, non-poisonous, non-corrosive and non-inflammable.

VISOLEAK is economical—

Wholesale Prices		Save 10% on case lots
4 ounce bottle . .	$1.00	48 bottles
8 ounce bottle . .	1.75	24 bottles
1 pint bottle . . .	3.00	24 bottles
1 quart bottle . .	5.00	12 bottles
1 gallon can . . .	16.00	6 cans

See your jobber or write for complete information

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5141 Angeles Vista Blvd. • Los Angeles 43, California

Please send me complete details about *VISOLEAK*.

Name_____

Address_____

Servicing the G-E Refrigerator Line

Replacement Procedure

Motor Replacement

CB, CD, AND CM OPEN-TYPE MACHINES

1. Disconnect motor leads.
2. Remove mounting screws.
3. Tilt motor and lift off belt.
4. Remove motor pulley setscrews.
5. Lift off motor pulley and shaft key.
6. Reverse previous steps to install replacement motor.

Compressor Replacement

CM-32, 33, 34, AND 35 OPEN-TYPE MACHINES

1. Move refrigerator to open air and remove motor-compressor assembly from cabinet.
2. Pump down compressor.
   a. Back-seat suction service valve.
   b. Remove plug from gauge connection of suction service valve.
   c. Install pressure gauge reading from thirty inches vacuum to fifty pounds pressure.
   d. Close suction service valve by front-seating it while compressor is running.
   e. Pump down compressor to about ten inches of vacuum, starting and stopping compressor a number of times to keep oil in case, and then allow it to stand about ten minutes.
   f. Admit a small amount of refrigerant vapor by opening suction service valve a crack until pressure is up to one pound.
3. Close both service valves by front-seating.
4. Disassemble service valve from compressor but do not disconnect from tubing or refrigerant will escape.
5. Remove compressor from base by taking out mounting screws, tilting toward motor, and lifting off belt.
6. Remove compressor pulley with wheel puller.
7. Assemble pulley to replacement compressor.
8. Remove plates from service valve openings of replacement compressor and immediately assemble service valves with new gaskets.
9. Mount compressor and line up pulleys with a straight edge.
10. Bleed air from compressor.

Open suction service valve by back-seating. Bleed by slowly opening gauge connection on discharge service valve until odor of refrigerant is noticed. Turn compressor by hand to help this bleeding. Tighten gauge connection.

11. Open both service valves by back-seating.
12. Observe machine operation.

Machine may require running for several hours before operating normally. If, after some time frost level on evaporator is low, add refrigerant.

CB, CD, CM-1, AND CM-2, OPEN-TYPE MACHINES

Although it can be done in the home, replacing a compressor on these machines is essentially a shop procedure. Remove machine from cabinet and return to shop. Refer to detailed manuals for instructions.

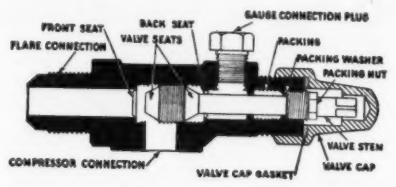

Fig. 53—Cross section of service valve.

25 Finish Course At Towanda, Pa.

TOWANDA, Pa.—Twenty-five men recently completed the refrigeration service training course conducted at the Northern Pennsylvania Power Co. office here by the Local Council of the National Refrigeration Service Council cooperating with the Pennsylvania State College Extension Center, reports G. H. Ritter, council chairman and merchandise service manager for the power company.

E. J. McGarrell, mechanical engineer in charge of service for the New York State Electric & Gas Corp. at Elmira, N. Y., instructed the enrollees, assisted by Martin F. Blocher, service representative for the Northern Pennsylvania company. Thirty-three originally started the course.

Officials of the power company had been concerned over the shortage of servicemen for 12 months prior to December, 1943, according to Mr. Ritter. A survey showed that there were 21,000 household refrigerators and 9,000 commercial and farm milk cooler installations on the company's lines, but only one-third the repairmen that formerly serviced the equipment.

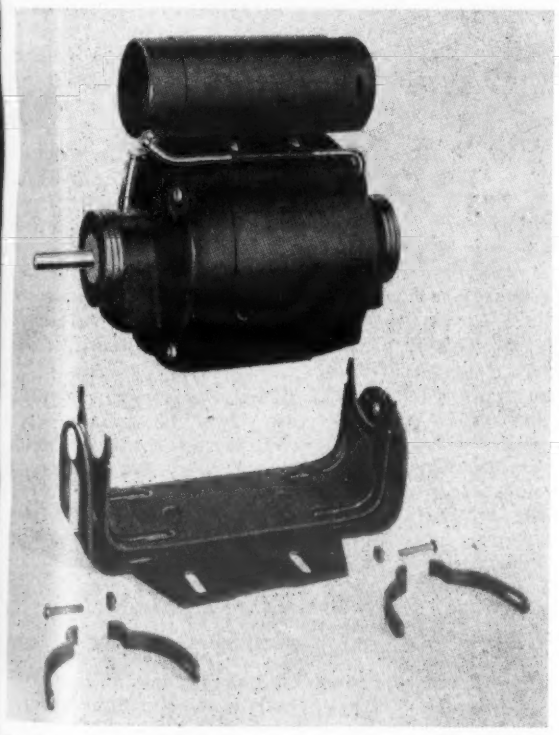

Fig. 52 shows the motor assembly for later open-type General Electric refrigerators.

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★ NOW AVAILABLE is this new 1/90 h.p. 1740 r.p.m. Heavy-Duty Fan designed to meet Grunow's rigid requirements for quality.

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3 Dynamically balanced rotor assures smooth running, vibration-free operation.

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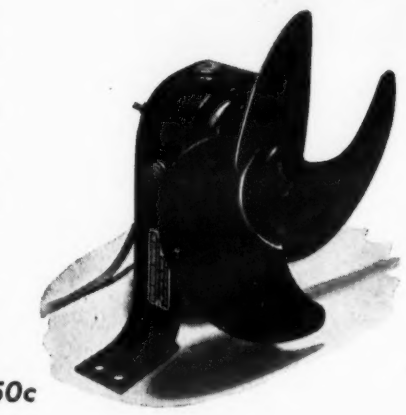

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THE HALLMARK OF *Quality*

The rectangle and triangle design shown above is the Mueller Brass Co. hallmark for refrigeration products. It appears in our advertising, on all our packages, on our labels and even on the goods themselves. It is generally carried in red, blue, white and black. Variations of color may sometimes be used, but the shape of the mark itself is always the same.

Our trademark is a point of honor with us as well as a mark of identification of our goods. It means that products of our manufacture carrying it are the best we know how to produce ...and time-tested for the purpose they are intended to serve.

The Mueller Brass Co. line of refrigerator valves, fittings and accessories is exceptionally complete. Service engineers can place full confidence in them. Rigid laboratory control, skilled engineering, highest quality materials, precision workmanship and rigid inspection combine to make our products constantly dependable.

Mueller Brass Co. refrigeration products are in use with our armed forces on practically every front. They are incorporated in units produced by other manufacturers who depend upon us for prompt service and quality products.

Write for catalog number 2007.

MUELLER BRASS CO.
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WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE
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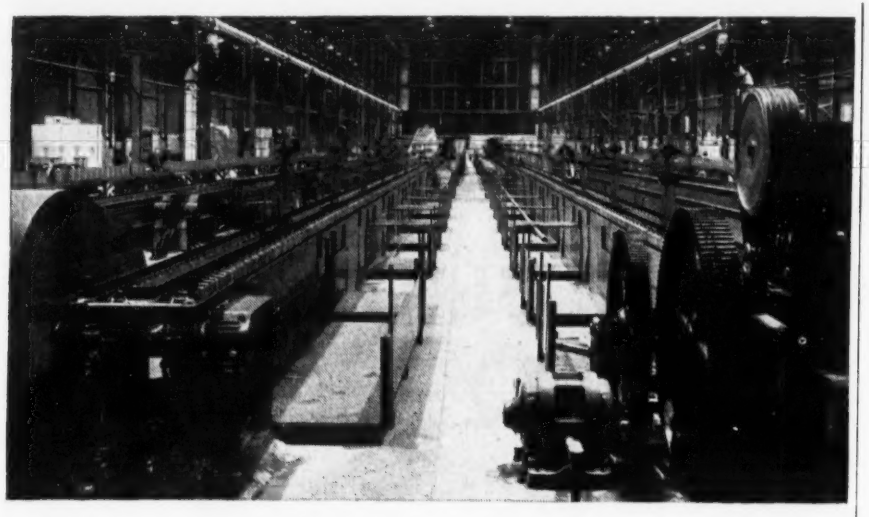

Looking Down the Main Bay

PENN TUBING is made in 50 or 100 ft. continuous coils to refrigeration manufacturers' specifications. Ends sealed and mechanically wrapped.

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PENN BRASS AND COPPER TUBING

Important Now, In Preparing For Contract Cancellation, Is Detailed Control Over Every Operating Procedure

And What Are Your Immediate Post-Termination Plans?

Editor's Note: This is the second of a series of four articles outlining the procedures most small manufacturers will have to follow in closing out their war contracts, presenting settlement claims to the government, and starting civilian production once again.

This instalment, and the one preceding, discuss what to do in preparation for contract termination. The two to follow will tell what steps to take when cancellation comes.

IV. Physical Planning

A. Labor Turnover

Adequate compensation for the great number of workers who will be at least temporarily unemployed is a necessary part of termination planning. Organized labor has leaned toward demanding enlarged unemployment insurance benefits, as opposed to dismissal wages.

Dismissal pay has been less considered because lump sums are apt to be more difficult to administer than spaced payments, and because the question of the eligibility of subcontractors' employes is doubtful.

Beyond the unemployment interval lies the question of rehiring, depending to so great a degree upon the speed with which contract termination and settlement claims are worked out, and new contracts, whether military or civilian, permit production to be resumed.

Article II

IV. Physical Planning
- A. Labor turnover.
- B. Production and scheduling.
- C. Currency of records.
- D. Surplus stock.
- E. Stopping points.

V. Records Planning
- A. Government review.
- B. Cost segregation.
- C. Termination expenses.
- D. Reimbursable costs.
- E. Vendor and customer parallels.
- F. Master plan.

VI. Post-Termination Plans
- A. Military contracts.
- B. Civilian contracts.
- C. Experimental production.
- D. Vendor and customer outlooks.

B. Production and Scheduling

To be in a position to close down all operations and shift over to new work as quickly as possible, your engineers will have figured out the military and civilian products that your plant can produce. The government must assign you a quota for materials and components before the production of civilian items can begin.

The piling up of useless inventories is best controlled by the accurate scheduling of incoming parts and raw materials. This must be undertaken, moreover, under full conformance to the controlled materials plan, general scheduling orders, and priorities regulations of the government's procurement agencies.

C. Currency of Records

Your preparation for immediate inventory disposal will depend most of all on the currency and accuracy of your stock-control records. There are four main points to remember:

(1) Inventories covering a group of manufacturing locations may be kept on an individual plant basis. (2) Inventory limitations do not govern stock on hand, (3) or limit minimum production runs. (4) There are certain classifications within which stocks are exempt from ordinary inventory restrictions.

If your company has more than one manufacturing location, individual inventories can be kept for each operating unit, and an inventory difficulty by any one of them will not tie up incoming parts or materials needed by the rest.

Inventory limitations as a rule apply to acceptance of stock deliveries, not to stock already on hand. For that reason a cutback in scheduled production will not require a reduced inventory. Stock left over after contract completion, or because of termination, is considered dead until it becomes useful on another job.

Various basic priorities and CMP regulations now stand amended to emphasize that, where it is not practicable to get needed materials in smaller quantities at stated periodic intervals, you may order and receive certain supplies farther ahead than minimum production runs usually would require.

This applies especially to noncritical seasonal goods, where raw materials often must be purchased at a certain time or not at all, to certain imported goods, and to supplies under similar restrictions making deliveries in small quantities impractical.

Conservation Order M-161 lists those items which, in addition to the general exceptions mentioned above, are explicitly exempt from WPB inventory restrictions.

It is good policy, however, where you are carrying an inventory larger than usual, to keep the procurement agency whose limitations apply posted on the circumstances making this advisable. It is dangerous to wait until termination to prove past exceptions planned for in good faith.

D. Surplus Stock

WPB and the various procurement agencies, together with the Surplus War Property Administration, have planned ahead for the disposal of used or idle parts, machinery, materials, and equipment.

Their policy favors disposal by the manufacturer holding title to the stock, whenever it is possible for him to do so. This means an accounting well in advance as to (1) the material and equipment he wants to keep for possible use in later production, whether civilian or military, (2) the stock that can be returned intact to the vendor, and (3) what should be sold.

A government contracting officer must approve each sale, and his approval will depend to some degree upon whether or not the material in question is being sold at cost, or according to schedules established by the Surplus War Property Administration. OPA ceilings probably will nullify any possibilities of selling at a profit. The contracting officer also will favor pretermination sale of any equipment no longer usable by you, and saleable now.

You will find the services of the contracting officer, of WPB, of the Redistribution Offices of the Armed Forces, and of the Foreign Economic Administration available in locating possible markets. Contact your own suppliers along similar lines, since early clearance for them will simplify your own.

The Army Ordnance Department has issued a published outline for simplifying plant procedure along the above lines. Copies may be obtained by writing to the Army Ordnance Department, Pentagon Bldg., Washington, D. C.

E. Stopping Points

Since a considerable amount of the material being worked on has no market value, contracting officers are authorized to allow the manufacturer to continue work on semi-fabricated material until it reaches a stage of most profitable salability.

Your production departments must then be prepared to estimate, at a moment's notice, (1) what material should be held as is for your own future use, (2) what material should be completed as far as certain prearranged stages, for purposes of sale, and (3) what material should be held for the government to take over.

Check likewise with your own subcontractors. Part of their products may figure into assemblies you intend to complete for sale. Their procedure in any event should parallel your own, and their knowledge of your intended plans can simplify the steps they must take.

V. Records Planning

A. Governmental Review

Inasmuch as a contracting officer must approve the termination proposal you set up, part of your practical preparation consists of having all records and statistics, as well as background material, ready and in order for the inspection of government auditors.

To be forehanded, have an expert accountant familiar with government auditing procedures check your records system and suggest any modifications that might facilitate clearance.

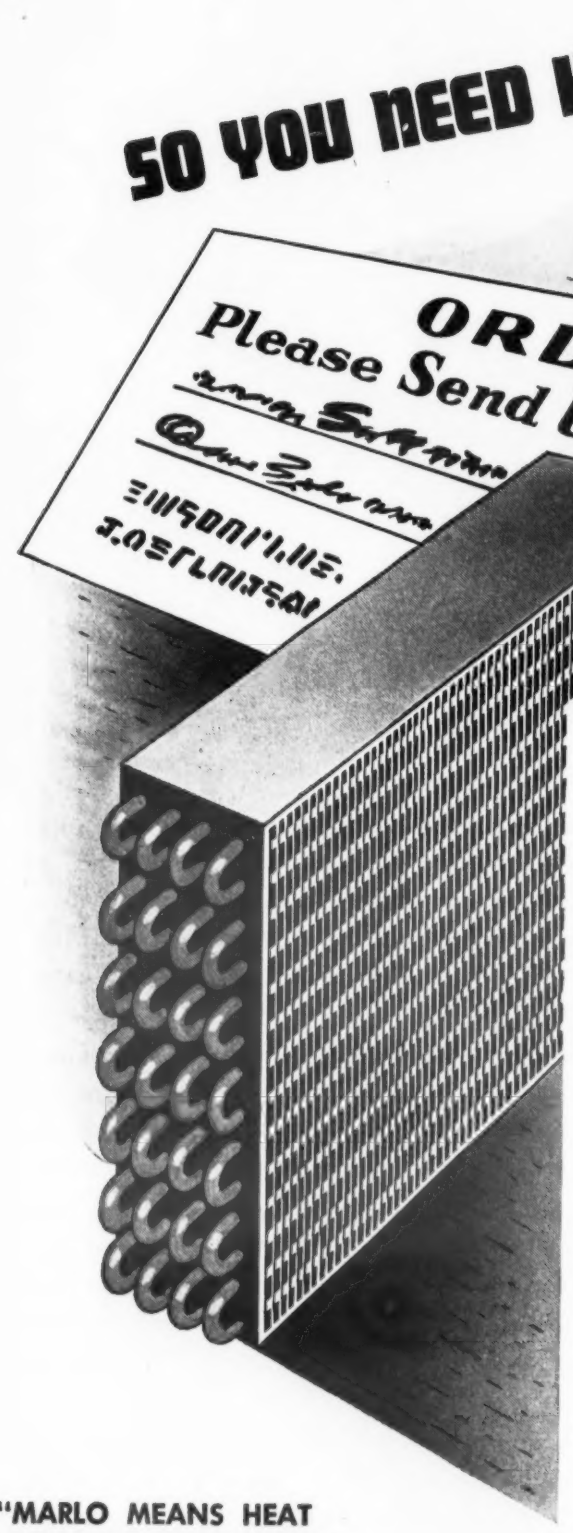
A pre-audit conference between your own accountant and representatives from the Army or Navy audit control sections can be arranged through your government contracting officer. They will be able to give final check against the termination requirements of standard government forms and schedules.

Remember that the over-all purpose of your preparation is quick and accurate cost segregation of materials, indirect factory expenses, direct production labor, and administrative expense.

Write to the War Department for

(Concluded on Page 27, Column 1)

SO YOU NEED HEAT TRANSFER COILS?



Don't expect to find them all in stock. It is not quite that simple. Marlo Coils are specially engineered for you.

Before the engineer's pencil touches paper, he must make an elaborate study and consider a great number of factors, such as operating conditions, refrigerant, pressure drop, circuit length, air velocity, flow resistance, humidity, and many others.

Here's where our Heat Transfer Experience counts. It assures you that Marlo Coils will give you exactly the performance you expect.

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"MARLO MEANS HEAT TRANSFER EQUIPMENT"

MARLO COIL COMPANY

ST. LOUIS, MISSOURI

Your Post-Termination Manufacturing Plans Should Be Ready For Immediate Beginning

(Continued from Page 26, Column 5)

its Termination Accounting Manual, obtainable from the Government Printing Office for 25 cents. Its outline simplifies the necessary steps in negotiated settlements.

Procedures for formula settlements come from the Chief of the Technical Service concerned, and are based upon the instructions laid down by the Fiscal Director of the Army Service Forces.

A guide to both negotiated and formula settlements is the Baruch-Hancock "Statement of Principles for the Determination of Costs Upon Termination of Government Fixed Price Supply Contracts," which applies to both.

Use of the standard termination forms issued by the War Department will make procedure easier and faster. They are issued in three sets, and are to be used when prime contractors file their settlement claims with the War Department and when subcontractors or suppliers file claims with their customers.

(1) Long Form A-1 is a settlement form for contractors claiming $10,000 or more before disposal credits. With it must be filed Schedule B-1 or B-2, explaining the contractor's own charges; Inventory Form C-1, for raw materials, purchased parts, and supplies; Form C-2 for work in progress; and Form C-3, listing the jigs, dies, fixtures, and other tools.

(2) Combination Form A-2 or A-3 applies for contractors claiming less than $10,000 before disposal credits, and like A-1 can be filled out on an inventory or a total-cost basis.

(3) Short Form A-4 is for settlement claims under $500. Facsimile forms may be drawn up for any of these forms, and used with full legal standing.

B. Cost Segregation

The business of lining up the records showing the costs of the various inventories, and the contracts to which they apply, necessarily follows the physical inventory but should be considered as part of it.

The procedure is much simplified if your physical inventory can be listed under each of three classifications: type of material, ownership of the stock, and specific contract application.

C. Termination Expenses

Separate accounts recording termination expenses will vary with the contract termination procedure you follow. There are three: the Army-Treasury or Navy fixed-fee supply clauses, the uniform fixed-price supply clauses issued by the Joint Contract Termination Board, and the Army construction cost-plus-fixed-fee clauses.

Computation under the old fixed-price supply clauses differs in a number of significant respects from computation under the new uniform clauses. Again, alternative methods of determining costs of the incompleted portion of a contract are possible.

These differences represent dollars-and-cents totals often equivalent to the difference between profit and loss on the contract as a whole. Have your accountant study them carefully before deciding which method you will use.

D. Reimbursable Costs

Conformation to government standards in the matter of permissible costs is of major importance. The determination of which costs are reimbursable and which are not presents probably the most controversial item in contract settlement.

Only those items of expenditure accepted by recognized accounting practices are allowed by the government. The bible for contracting officers again is the Baruch-Hancock statement.

This cost guide discusses valid and invalid labor costs, material costs, overhead costs, depreciation charges, claims for losses on facilities, and other permissible costs such as special leases, starting-load costs, experimental and research expenses, advertising expenses, interest charges, patent royalties, termination and post-termination expenses.

Non-reimbursable costs include usually such accounts as losses on other contracts, expenses resulting from termination delays, financing and other interest charges not directly traceable to work on a terminated contract, and reconversion expenses toward reestablishing normal operations.

These are qualifiable classifications and must conform to specific standards which the contracting officer must determine.

E. Vendor and Customer Parallels

Be sure that both your suppliers and those you supply are relevantly familiar with your cost-accounting method. There should be sufficient similarity between yours and theirs to make comparison and continuity possible.

F. Master Plan

All these preparations toward what to do before termination hits you must be correlated and organized into a master outline of procedure. There is direct relationship between the first step and the last, however far apart, but you may need a visual outline to prove it.

Be prepared to set up an operating manual, then, that will represent the organized total of your plans as a reference guide for all departments when the time comes.

VI. Post-Termination Plans

A. Military Contracts

The discussion up to this point has been nothing but pointers on complete housecleaning. There is the other side to be considered—what are you going to do afterwards?

If you have been working under military contract, the easiest conversion for you may be toward another military contract. Confer with your government contracting officer, and with the procurement agencies and WPB's industrial divisions, for any similar new military contracts that may be open.

The government also is facing a big job abroad, now and postwar, in the matter of supplies for liberated and conquered countries there. The government's needs fall into three general categories:

(1) Heavy industrial equipment to replace and rebuild the major enterprises destroyed by war. Road building and construction machinery will be needed, harbor dredges and transportation facilities, public health and public utilities equipment.

(2) Some large and much small machinery needed to set up local industries and local community activity. Paramount here are farm implements, building material, and machinery for food processing and textile manufacture.

(3) Considerable food and clothing will be needed directly for immediate relief in the devastated areas. Much of the needed home supplies and consumers' goods must come from us until local industries get into production again.

B. Civilian Contracts

Some civilian lines will resume production before the war ends. Wherever possible, war plants freed from military production will be assigned critically short civilian goods, but the nature of resumed civilian production will depend also upon such factors as labor supply, raw materials, and available machinery.

Your market research and sales departments will be keeping an eye on growing markets here at home. The material supply situation also deserves close attention. Reserves are created overnight by changes in war strategy as victory on any one war frontier shifts the direction and the supply needs of new offensives.

The activities of the Foreign Economic Administration will call for an increasing amount of civilian goods production needed in the countries abroad where that agency is operating. Keep in contact with their production needs.

C. Experimental Production

The Baruch-Hancock report recommended that small quantities of materials be made available to manufacturers for experimental production of critically short consumers' products. The move was seconded by WPB, and under certain restrictions various metals and shortage materials now can be secured. The following conditions must be satisfied, however:

A minimum number of test models is allowed, or minimum production runs, enough only to determine practical commercial value. The research, testing, and production manpower needed must not take any men from war work. And there must be no distribution or display for sales promotion purposes.

Manufacturers of the more complicated appliances obviously will have to use greater ingenuity than producers of simple items. However, experimental parts not prohibited by any of WPB's L or M orders are not vetoed.

Research possibilities include one other item—alien patents now under the jurisdiction of our own government. The scope of these patents is tremendous, and their practical value so far has been limited only by people's lack of knowledge about them (see the discussion of those related to refrigeration in the Aug. 14 issue of the NEWS).

For a complete listing and description of the alien patents that affect

(Concluded on Page 28, Column 1)

What a Big Difference the "RECALIBRATOR" Makes . . .

The "Recalibrator" is available in all Marsh Gauges, standard in all Marsh Dial Thermometers.

NO ONE knows better than you just what a gauge for refrigeration service must measure up to. You know, for example, that any gauge ever made can be suddenly knocked out of adjustment. Probably you've learned too that once this happens to an ordinary gauge, it's a real job to restore accuracy.

That's where the "Recalibrator" makes the big difference. It doesn't merely "adjust" the pointer back to zero—it actually recalibrates the gauge by re-establishing proper relation between bourdon tube and movement. The gauge is accurate again at all points on the scale.

We do not claim that Jas. P. Marsh makes the only good gauges. We do believe that no one can make better gauges, because Marsh has specialized in this field ever since 1865. And we do claim that the "Recalibrator", as the finishing touch to a fine gauge, makes Marsh your best buy today.

Leave it to your own good judgment. Look at all the facts, and you'll look for the "Recalibrator" every time.

JAS. P. MARSH CORP., 2067 Southport Ave., Chicago 14, Ill.

MARSH *Refrigeration Instruments*

TO ENGINEERS and contractors in refrigeration and air conditioning fields, the origin—and present-day significance—of the G-E Scotch Giant have a new importance.

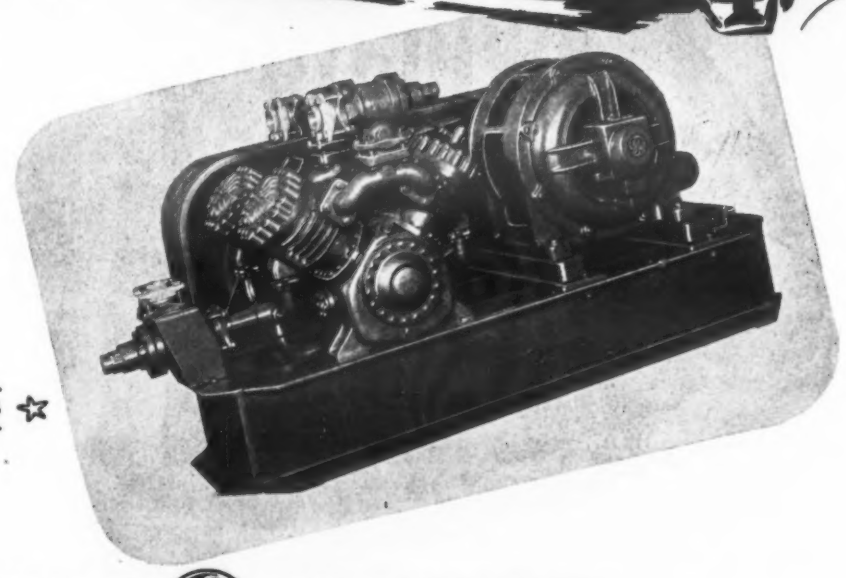
The Scotch Giant is not just an artist's idea. He came into being because he typified so accurately the features that have made "Scotch Giant" Condensing Units the leaders wherever cold is needed. These features are *ruggedness, reliability, thriftiness.*

"Scotch Giants" are *rugged* because they are built from carefully selected materials, utilizing advanced manufacturing techniques to assure long life under severe conditions.

Their *reliability* comes from such features as dependable lubrication . . . hard core gaskets and balanced-pressure shaft seals for lasting protection against loss of refrigerant or oil . . . multiple V-belt drives.

Their *thriftiness* results from the high *thermodynamic* efficiency of the G-E Compressor . . . the high *electrical* efficiency of the G-E Motor . . . the high condensing capacity of the G-E Condenser.

For full details on these features of "Scotch Giant" Condensing Units, write to: *General Electric Company, Air Conditioning and Commercial Refrigeration Divisions, Section 4708, Bloomfield, N.J.*



☆ BUY . . . and hold . . . WAR BONDS ☆

GENERAL ELECTRIC

Hear the General Electric Radio Programs: The "G-E ALL-GIRL ORCHESTRA," Sundays 10 p. m., EWT, NBC . . . "THE WORLD TODAY" News, Every Weekday, 6:45 p. m., EWT, CBS

Idle Plants & Alien Patents Open Up Mfg. Possibilities

(Concluded from Page 27, Column 5)

your field of production, write to James E. Markham, U. S. Alien Property Custodian, National Press Building, Washington 25, D.C., or to Raymond F. Linehan, Field Building, Chicago 3, Ill.

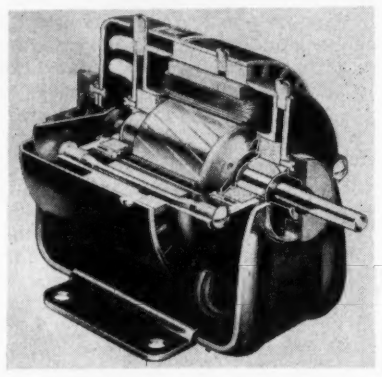
D. Vendor and Customer Outlooks

Continued labor shortages mean that conversion to civilian production will be allowed virtually only in surplus labor areas. The purchase of idle plants in such areas, or arrangement with subcontracting companies not engaged in war production, can allow WPB to increase your civilian production quota.

Planned use of non-shortage material also is good grounds for quota application. And small plants, regardless of their location, will be granted quotas for civilian production. A small plant employs less than 100 people (50, if in the critical West Coast area), according to the definition.

Keep in touch with your prime contractor and his future production plans. And with OCR and SWPC. These and other procurement agencies are, under recent and forthcoming Congressional legislation, being given increased authority to help manufacturers through the process of contract termination.

New Small Motor Line Introduced By Redmond



Cut-away view of the new "Micromotor" manufactured by the A. G. Redmond Co.

* * *

OWOSSO, Mich. — New line of shaded pole, totally enclosed electric motors ranging from 1/125 up to 1/25 hp. incorporating a new pressure-locked, resilient rubber mounting has been introduced by the A. G. Redmond Co. here.

Known as the type "T" Micromotor, all base-mounted models use the new mounting consisting of two rubber pads, two spring steel lock rings, and a base welded into a single rigid unit.

Patented "flush-weld" rotor design is employed. All rotor slots are copper filled flush with circumference with preformed copper inductors, fuse welded permanently into position for maximum electrical conductivity in the circuit. Change of inductor resistance permits modifications for different performance characteristics.

Frame is a three-piece die cast design carefully machined to insure correct alignment of parts after assembly. Non-gumming, porous bronze bearings filter the lubricant. Large oil reservoirs permit safe bearing operation for long periods without replenishing. Special voltages, frequencies, leads, finishes, and shaft extensions are available .

Forming Press Adopted To Shape Plastic Sheets

CINCINNATI—A new development believed to have extended postwar applications in the use of laminated plastic material manufactured by the Formica Insulation Co. has been the product of wartime ingenuity and research.

Cut blanks of laminated Formica go into a forming press. When these pieces of sheet come out they are formed in ammunition chutes for bombers.

Heretofore when it was desired to shape Formica, it was necessary to build molds to mold the material.

The engineering department at Formica with cooperation of some aviation engineers employed in the factories making the big bombers discovered that the cured sheet could be heated up to a temperature just under the blistering point and, if stamped quickly, could be formed to a shape.

Continued experiment demonstrated that the formed shape could be maintained.

Civilians Eye Army's Insect 'Bomb'

This aerosol insect "bomb," now manufactured for the Armed Forces by Westinghouse Electric & Mfg. Co., will be produced for civilians after the war. Pressure of "Freon-12," with which the bomb is filled, discharges the insecticide in the fine mist shown at right. The bomb is fitted with a small screw cap to permit repeated applications.

Filtrine Expands Line Of Water Coolers

BROOKLYN — Filtrine Mfg. Co., manufacturer of liquid coolers and water filters, has recently introduced a series of new water cooler models, capable of producing water cooled to temperatures as low as 34° F.

These new units, designated as Filtrine "RA" and "RAC" models, are constructed of heavy steel plate, riveted and welded, hot-dip galvanized inside and out after fabrication and tested for 125 lbs. working pressure. Submerged evaporator is fabricated of extra heavy steel pipe and insulation consists of more than 2 inches of pure corkboard. Cold water storage capacities range from 30 gallons to 150 gallons, and hourly capacities from 134 to 840 gallons.

The "RA" models are equipped with a low temperature cooling unit and the "RAC" models are provided with a similar unit and in addition, a 1/3-hp. bronze discharge pump so that the water, after it has been cooled, may be pumped to a dough mixer, mixing tank, sink, etc.

Shut-off valves and automatic air vents are provided on the "RAC" models so that if desirable, warm water supply may be closed, allowing for the discharge of the entire contents of the water cooler at the required temperature. Automatic air-vent allows the entrance of air when the cold water is being discharged from the storage type water cooler and permits the escape of air when the cooler is being re-filled with warm street water.

Bakery installations, requiring water in batches for their dough mixing, are particularly in need of storage type water coolers capable of producing water cooled to temperatures as close to freezing as possible. Many of the approximately 8,500 bakery plants throughout the country are using artificial ice in their dough mix and today are sometimes unable to get delivery of ice. Furthermore, health regulations in many communities discourage the use of ice, for obvious and unsanitary reasons.

Drayer-Hansen Announces Enclosed Ceiling Coils

LOS ANGELES—Housed in white enamel cabinets, a new series of "Spasaver" ceiling-type, horizontal coolers for cold rooms and large refrigerators has been introduced by Drayer & Hanson, Inc. here.

Models in 10 different sizes are available, designed for use in institutions, restaurants, food processing plants, and similar applications where cleanliness and sanitation are important, the company says. The coolers are said to be suitable for all refrigerants.

Units are equipped with new type propeller fans operating with practically no noise, the company claims. Coils are of the fin and tube type, equipped with D & H kinetic type refrigerant distributor. Motors are slow speed, totally enclosed, ball bearing type, 115 volt, single phase.

"The Record is...Trouble-Free"...

30 years in the manufacture of refrigeration units has enabled Kelvinator to establish a trouble-free record unsurpassed in the industry.

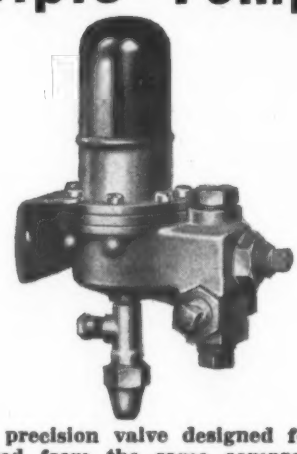
Kelvinator
condensing units
SEALED · OPEN

For your home — Remember Kelvinator Refrigerators, Electric Ranges, Water Heaters and Home Freezers . . . they, too, are famous for trouble-free performance.

SNAP ACTION VALVES
for Multiple Temperature

Adjustable from 20" of vacuum to 63 lbs. pressure

Proven in Performance



Differential 7 lbs. minimum to 29 lbs. max.

Free from bellows strain

Here is a marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of an Aminco Snap Action Valve.

This means more today than ever before, what with the difficulties experienced by the serviceman in satisfying his trade with "too little" material for the work to be done.

Aminco Snap Action Valves are not an experiment. They have proven their worth in years of actual service and are doubly useful under today's conditions when one piece of equipment must do the work of several.

May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either.

As always, our company is definitely interested in the survival of the refrigeration industry and is doing its utmost to cooperate with established operators.

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT 16, MICHIGAN
Van D. Clothier, 1015 E. 16th St., Los Angeles, Calif.
George Boone, 739 G. M. Bldg., 1775 Broadway, New York 19, N. Y.
William H. Cody, 2nd Unit, 10th Floor, Santa Fe Bldg., Dallas, Texas
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

Wilson Attacks Critics As He Leaves His Position With WPB

(Concluded from Page 1, Column 2)

been "constantly pilloried" by charges that they were holding up reconversion to favor big business over small business.

He disclosed that he had submitted to Nelson eight or nine months ago "the only reconversion plan WPB has," but that some 20 weeks elapsed before he could get Nelson to approve it.

Asked if there was any explanation for the delay, Wilson thumped his desk and said:

"Yes, there is an explanation. 'Manana'—the Spanish term for 'putting off things until tomorrow.'"

President Roosevelt, in acknowledging the letter of resignation, said he was reluctant to accept it, and stated:

"The wonderful record we have made in aircraft production and shipping construction is evident of the splendid contribution you have made to the war effort."

In his statement, Mr. Wilson denied that he was opposed to reconversion, declaring:

"These statements, like many similar statements that have appeared in recent months, were, in my opinion, inspired by subordinate officials of the board connected with the personal staff of Mr. Nelson.

"I have again and again expressed the view that I am opposed to any interference with war production as its necessities are presented to me by the commander in chief and by the joint chiefs of staff.

"Last December when I had been with the board for more than a year, war production had progressed so satisfactorily that I felt my job was completed and I asked you to permit me to return to my business. You insisted upon my remaining.

"Again in April I felt that the production programs generally were in such condition that I could ask to be released, but you prevailed upon me to remain, indicating that *you might* consent to my leaving about the end of July. Last Saturday I again presented the same request. You asked that I remain until Germany capitulated or the several production programs now lagging improved. I agreed and I left you with renewed inspiration."

Wilson then assailed what he described as "unjust attacks" upon him by unnamed persons in WPB.

"It is apparent to me," he wrote the President, "that instead of being discontinued these attacks upon me and members of my staff will be increased.

"I cannot answer them unless I employ publicity experts. I am unwilling to do that. A continuance of the attacks will impair the efficiency of key men and will more than offset any contribution that I can make to the improvement of the lagging programs. When the minds of men are diverted from their tasks to answering criticism they believe to be unfair, the war effort will suffer.

"It is obvious that the unjust attacks upon me do me great personal injury. However, that is important only to me. The thing that is important is that the dissension within the organization does harm to the war production effort and, therefore, to the country. I am unwilling to be a party to such a controversy. I feel that anything I can do to end the controversy would be a service to my country.

"I appreciate the great honor you bestowed upon me when you gave me the responsibility of war production. You have supported and inspired me. I have given my best. For the reasons stated above, I have reached the definite conclusion that I can best serve the country and you by resigning."

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION
47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

In New Crosley Post

L. C. TRUESDELL

* * *

Truesdell Succeeds Roe, Who Joins Distributor

(Concluded from Page 1, Column 2)

sales manager for the Sterling Radio Corp. in Kansas City, Mo., and later operated his own retail appliance business in three stores in Kansas City. His merchandising experience covers 20 years.

Mr. Roe has been with Crosley since 1941, when he was appointed western sales manager. Soon afterwards he became manager of the major stores division, and later manager of distribution. Previously he had been domestic sales manager for Universal Cooler Corp., following 14 years as eastern and central regional manager of the Leonard Division of Nash-Kelvinator Corp.

The J. N. Ceazen Co., which Mr. Roe will manage, distributes Dayton tires for the state of California, and handles the complete Crosley line. The firm operates branches in San Francisco and San Diego and has postwar plans to expand its specialty division, including the enlarging of both branches and modernization of the Los Angeles headquarters.

12 Locker Firms Planned For Maryland, Virginia

WASHINGTON, D. C.—Building of 12 locker plants equipped to rent space to some 3,700 families in a limited area covering part of Maryland and Virginia is planned for the next eight months by three firms.

Country Life Frozen Food Lockers, Inc., intends to erect nine plants, four in Prince George county, three in Charles county, and two in Montgomery county, Maryland. Southern States Co-operative has scheduled plants in Gaithersburg, Md., and Fairfax, Va., while the Maryland Frozen Food Locker Corp. will build a plant in Falls Church, Va.

Those plants in Charles county will be the first in southern Maryland, claims Perry O. Wilkinson, president of the Country Life organization. Most of the locker plants will have a capacity of 500 lockers, each large enough to accommodate 250 to 300 lbs. of food, with rentals ranging from $12.50 to $17.50 a year, according to Mr. Wilkinson.

The two plants of Southern States Co-operative will have 500 lockers each and will rent from $10 to $15 a year, it was announced.

In promoting these plants operators have stressed the low cost of butchering and freezing, and the possibility of avoiding meat shortages due to rationing. A city family who owns a cow for 60 days can have it slaughtered without expending ration points, according to Frank R. Wilson, secretary-treasurer of the Country Life firm. Where ration points are necessary, the points can be pledged for a period of one year, he added.

Tracy & Co. Appointed Admiral Distributor

PROVIDENCE, R. I.—Tracy & Co. here has been appointed distributor in Rhode Island and several counties in Connecticut and Massachusetts for Admiral Corp. products, announces R. D. Siragusa, president of Admiral.

Harry Tracy, president, and Lawrence B. Leavitt, vice president, head the firm, which was founded in 1934.

Appliance Production Awaits Further News

(Concluded from Page 1, Column 2)

tain components for these appliances, principally motors, were unobtainable. Vacuum cleaners, it was said, might get into production sooner for in many cases the cleaner manufacturers make their own motors, and would be likely to reconvert as soon as they had completed their war contracts.

It was also revealed at the press conference that the copper shortage is apparently getting worse, while the situation on carbon steel may be improving somewhat.

Mr. Nelson also elaborated on the statement played up in the press to the effect that "the Fall of Germany will result in production of civilian goods equivalent to that produced in 1939." He said that this did not mean that each industry would be permitted to produce at its 1939 levels, but that the over-all civilian production might be at that figure.

Lehigh Valley Distributors Take on Crosley Line

HAZELTON, Pa.—Appointment of Lehigh Valley Distributors of Hazelthe Salt Lake City office since early Corp. in the northeastern part of Pennsylvania, has been announeed by B. T. Roe, Crosley manager of distribution.

Lehigh Valley Distributors, a newly formed business, will handle a complete line of Crosley products when available. In the meantime, the firm will handle a full line of Crosley parts. The company is directed by O. J. Mannen.

Carrier Co. Expansion Seen In Stock Move

(Concluded from Page 1, Column 4)

sion, he admitted, for the purpose of cost reduction and to provide facilities for larger production and the manufacture of new products, but no definite amount of capital has as yet been earmarked for this purpose. At present, Mr. Wampler added, the new funds will be invested in short-term Government notes pending the removal of governmental restrictions on buying equipment and the latter's becoming available.

Just what new products Carrier is planning to produce was not announced by Mr. Wampler.

The new preferred stock issue consists of 120,000 shares of $50 par value. Only 70,000 shares will be issued at first. Convertible to common stock, the new preferred stock will be offered to present stockholders at the rate of 16 preferred shares for each 100 shares of the outstanding 415,666 common shares. Sale of the new preferred should net $2,000,000 after provision for funds to retire outstanding debentures.

Earlier this summer, Carrier arranged for a VT loan and credit agreement allowing the company to borrow up to $12,000,000 on its war contracts.

Westinghouse Shifts Bodine To San Francisco Office

SALT LAKE CITY — Frank E. Bodine, Utah and Idaho representative for the Westinghouse Electric & Mfg. Co. since 1928 and manager of he Salt Lake City office since early 1941, has been transferred to San Francisco as manager of the company's San Francisco office.

Refrigeration Speeds Silkworm Cycle

RIO DE JANEIRO, Brazil—Silkworms seem to enjoy cooling, too. At least, they produce a lot more silk when they're kept under refrigeration, experimenters in Brazil have found, according to the U. S. Department of Commerce.

Normal temperature in Brazil is said to be ideal for mulberry trees, essential to silkworms, but the silkworms seem to thrive better in refrigerators where their life cycle is speeded up considerably. The quicker the silkworm spins its cocoon, changes into a butterfly, and produces more eggs and silkworms, the more silk is produced.

Ten crops of cocoons a year may be produced by the proper application of cool air, it was shown in tests conducted with refrigerators in experiment stations. Extensive cooling units have already been installed in one experiment station to increase silkworm production.

As part of the program to build up silk production in Brazil to supply the silk which formerly came from Japan, experiments are being conducted on 300,000 mulberry trees to develop the most satisfactory strains.

200 Attend Detroit Picnic

DETROIT—More than 200 refrigeration repairmen and their wives, not counting children, attended the annual picnic of the Refrigeration Contractors Association of Detroit held at Beverly Gardens near here on Aug. 19.

Races, baseball games, golfing, and an evening dance featured the all-day outing, which included a dinner and lunch served by the association.

WE'RE NOT BLAMING UNCLE SAM

He's doing his best for you and for us—we're matching his effort for you and doing our utmost to help you under trying circumstances (yes, we've been in and are in the war effort, but we're not taking any credit because we feel it's our duty, not an honor).

Not only have we continually expanded our facilities during the past three years but at present another new addition is in the process of completion and will be in operation within a few weeks. This is just another example of what MASTER is doing to help you.

Remember (and it wasn't so long ago) when things got tough and you needed "a friend at court" in Washington? Who was it that fought your battles? Right—It was MASTER. Still another example of our policy to "never let you down". We didn't quit—we fought and you got the benefit. "Look to MASTER" isn't just a phrase—it's something to hitch your wagon to.

We have no apologies to offer—we are merely stating facts that are known throughout the industry. We come to you as associates and ask your indulgence in these trying and critical times.

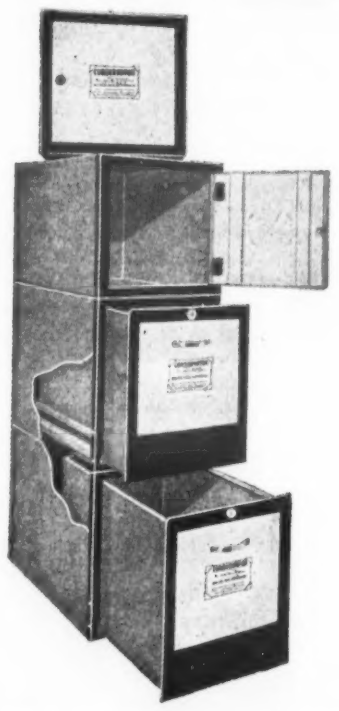
Tomorrow as today—we will continue to serve YOU. It is yours to command and ours to serve "Come Hell and High Water".

Our effort is a business, not a side issue. We started when Locker plants were an Idea—not an industry. We're proud to have been in at the birth as well as the development of this growing and lusty industry. Master Manufacturing Corporation, Sioux City 4, Iowa.

Experience... Has No Competition!

Knowledge can only be gained thru experience and experience is only gained by devoting the entire resources of men and machinery plus a constant study of the requirements of an industry—if you are to produce a single line of products that are outstanding in every respect. In our case it is Food Storage Lockers for Locker plants and we are justly proud of our accomplishment. So when you want *good* lockers and *it pays* to get them—demand

MASTER FOOD CONSERVATORS



They are solidly built of steel by men who pioneered the industry. They have features that assure profitable and economical Locker plant operation. It costs no more to get the "Choice of the Industry". If you want lockers that meet your every requirement—demand MASTER.

Write for Full Particulars

Safeguard your investment by getting the facts about MASTER before you buy any locker. It's the first-cost, last-cost locker. Better be safe than sorry.

Endorsed by and sold through distributors of refrigeration and insulation.

MASTER MANUFACTURING CORP.
121 MAIN STREET SIOUX CITY 4, IOWA

Member of Frozen Food Locker Manufacturers and Suppliers Association organized for your protection.

Over 650,000 Master Food Conservators in Use

For: TRUCKS, LOCKERS, COOLERS, COUNTERS, CABINET CONVERSIONS, use:
KOLD-HOLD PLATES
KOLD-HOLD MFG. CO.
LANSING, MICH., U.S.A.

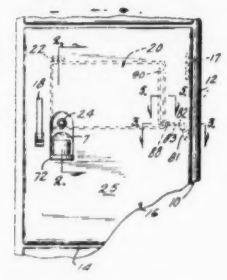
NIAGARA
"NO-FROST" METHOD WITH SPRAY COOLERS
. . . gives always full capacity because there is no interruption for defrosting at sub-zero temperatures; protects quality in foods.
NIAGARA BLOWER COMPANY
25 Years of Service in Air Engineering
Dept. AC, 6 E. 45th St., New York 17, N. Y.

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

PATENTS

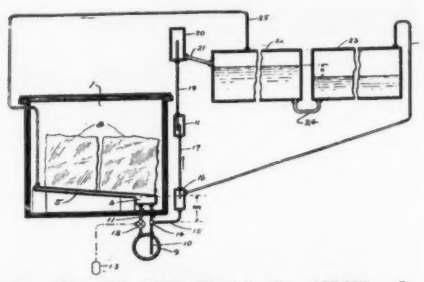
Weeks of July 25 & Aug. 1

2,354,272. COOL WATER RESERVOIR FOR REFRIGERATORS. Kinney I. Miller, Lancaster, and Irwin Dunbar, Kirksville, Mo. Original application July 7, 1941, Serial No. 401,326, now Patent No. 2,299,103, dated Oct. 20, 1942. Divided and this application Oct. 20, 1942, Serial No. 462,734. 6 Claims. (Cl. 62—89.)



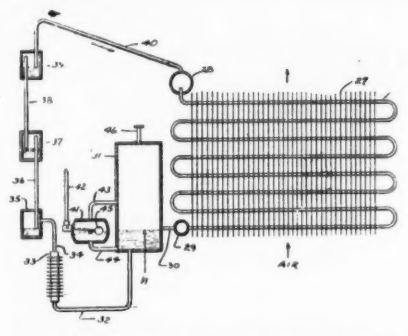
1. In a refrigerator cabinet including a door structure and hinges attaching the door to the cabinet, the combination of a removable cool water reservoir attached to the door structure comprising a relatively thin receptacle having an outlet tap and a water inlet connection, said door having a tap receiving aperture extending from one side to the other and a recess in the inner wall slightly larger in height and width than the receptacle, said receptacle being positioned normally in the recess, a sealing strip around said recess forming a dead air space between the adjacent wall surfaces respectively of the receptacle and the recess, a supply pipe for tap water, a pivotal water connection having its pivot axis in alignment with the axes of the door hinges, one end of said connection being attached to the supply pipe, a pipe extending from the other end of said connection into the door structure, and a releasable coupling for attaching said pipe to the water inlet connection on the receptacle.

2,354,496. REFRIGERATION METHOD AND APPARATUS. Robert T. Brizzolara, New Dorp, Staten Island, N. Y. Application May 14, 1943, Serial No. 486,991. 8 Claims. (Cl. 62—125.)



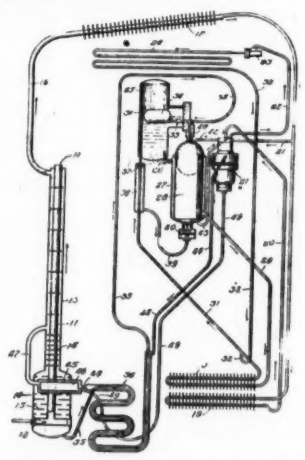
1. A refrigeration system including an evaporator, a condenser, and a liquid receiver connected in a refrigerant circuit, said receiver being located below said condenser, a tube for draining liquid from said condenser into said receiver, a separate tube for conducting vapor from said receiver back to said condenser, and means for throttling said separate tube for causing liquid from said receiver to flood back through said first mentioned tube into said condenser when a desired condition is brought about by the evaporation of refrigerant in said evaporator.

2,354,497. REFRIGERATION APPARATUS. Aobert T. Brizzolara, New Dorp, Staten Island, N. Y. Application June 12, 1943, Serial No. 490,561. 9 Claims. (Cl. 62—125.)



1. Refrigeration apparatus comprising a main evaporator, means forming a liquid accumulator connected to said evaporator, said accumulator having a sump located below said evaporator for draining liquid therefrom, a pilot evaporator connected to said accumulator for receiving liquid therefrom, and means including a plurality of lift fittings connecting said pilot evaporator and said main evaporator, said pilot evaporator absorbing heat and evaporating liquid therein and said lift fitting utilizing said vapor to lift liquid refrigerant from said pilot evaporator for supply to said main evaporator.

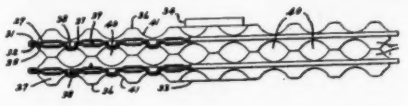
2,354,705. REFRIGERATOR CONTROL SYSTEM. Joseph N. Roth, Belding, Mich., assignor, by mesne assignments, to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application June 27, 1941, Serial No. 400,089. 9 Claims. (Cl. 62—5.)



1. Apparatus of the character described for controlling delivery of refrigerant from a high pressure portion to a low pressure portion of a continuous absorption refrigeration system incorporating means for periodically returning liquor from the low presure portion to the high pressure portion and wherein the high pressure portion includes a still, including: a capillary tube element designed to receive the entire pressure differential in the system; a valve element including a valve member adapted to be moved to open or closed position and so constructed as to always remain either in fully open or fully closed position, said elements being parts of a flow path connecting the high and low pressure portions and all of the refrigerant flowing through said path passing through both of said elements; and means for moving said valve member, said means being responsive to a condition in the still.

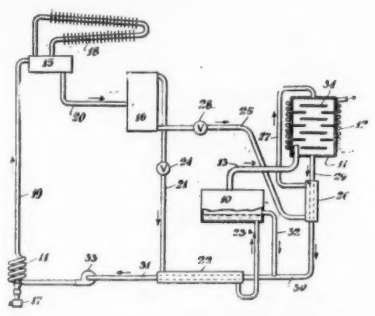
2,354,865. REFRIGERATING APPARATUS. Robert T. Brizzolara, New Dorp, Alex A. McCormack and Glenn W. Wolcott, Dayton, Ohio, asignors to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Jan. 17, 1941, Serial No. 374,908. 2 Claims. (Cl. 257—140.)

2. A heat exchanger comprising a bank of pairs of plates, each plate being formed with dimple-like depressions arranged in mutually substantially perpendicular series of rows, the two plates of each pair having their dimple-like depressions in opposed relationship and being spaced apart throughout said rows to provide a fluid passageway between the two plates, the plates of each pair being secured together at their edges and having nested portions diagonally between the dimples of adjacent rows, each of said depressions having a flat base portion and an interiorly convexly continuously curved side portion, the flat base portions of the depressions of one pair of plates abutting corresponding



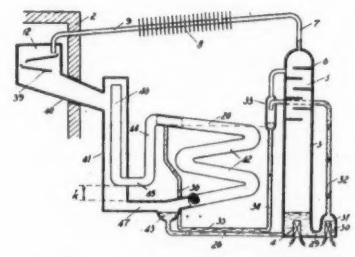
flat base portions of the depressions of adjacent pairs of plates, the dimple-like depressions in said rows in each plate being contiguous to one another and the curved side portions of the depressions in each pair of plates thereby providing opposed interiorly convex wall surfaces for said fluid passageway continuously along said rows between the wall surfaces thereof provided by the flat base portions of the opposed spaced apart dimple-like depressions in each pair of plates.

2,354,884. REFRIGERATION. Thomas K. Sherwood, Wellesley Hills, Mass., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 25, 1941, Serial No. 390,257. 15 Claims. (Cl. 62—119.)



1. A refrigeration system containing a solution having the property of stratifying into its component liquids upon increase in temperature and including means for heating said solution to cause said stratification, an evaporator, an absorber, and means to direct one of said component liquids to said evaporator and another of said liquids to said absorber.

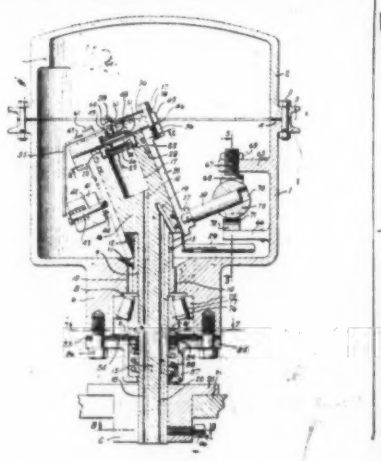
2,354,982. ABSORPTION MACHINE CONTAINING AN INERT AUXILIARY GAS. Alexander Bikkers, The Hague, Netherlands; vested in the Alien Property Custodian. Application Feb. 6, 1941, Serial No. 377,745. In the Netherlands Feb. 21, 1940. 10 Claims. (Cl. 62—119.5.)



1. A continuous absorption machine comprising an absorber and an evaporator containing an inert auxiliary gas and a refrigerant which in the gaseous state is of a relatively higher density than the inert auxiliary gas, said evaporator being situated at a higher level than the said absorber, and full open communciation means between the interior spaces of the said absorber and the said evaporator, said communciation means being connected to the evaporator adjacent the bottom thereof, the absorber being located laterally of the lower part of the said communciation means and being in open connection with the same through two passages at different levels, the upper one of said passages being formed by a U-shaped conduit having one leg connected to the absorber and the other leg connected to the said communication means, said U-shaped conduit being dimensioned and arranged so as to prevent substantial reverse flow therethrough of the inert auxiliary gas from the absorber to the evaporator due to differences in density as between the gases in different parts of the space enclosed by said evaporator, absorber, and communciation means.

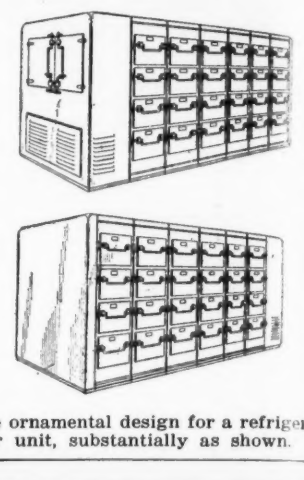
REISSUE

22,526. ROTARY RECIPROCATING COMPRESSOR. Sylvester A. Limpert, deceased, late of Bay Shore, N. Y., by Katherine E. Limpert and Alexander S. Limpert, executors, Bay Shore, N. Y., and Alexander S. Limpert, Bay Shore, N. Y.; said executors of said Sylvester A. Limpert, deceased, assignors to Katherine E. Limpert. Original No. 2,201,188, dated May 21, 1940, Serial No. 32,868, July 24, 1935. Application for reissue Dec. 15, 1943, Serial No. 514,429. 33 Claims. (Cl. 230—175.)



1. In a compressor, the combination comprising a rotatable shell forming a refrigerant receptacle, a cylinder element mounted in said receptacle and having a compression chamber that is periodically in communciation with the receptacle during the operation of the compressor, a piston element mounted in said cylinder and relatively reciprocatable with respect thereto, said piston having a shank element which projects through said shell; one of the said compressor elements being stationary, but relatively rotatable with respect to the shell, and the other element being capable of rotation and reciprocation with respect to said stationary element, driving means interconnecting one of said compressor elements with said shell and means for sealing the joint between said shell and said shank to prevent the escape of refrigerant there-between.

138,391. DESIGN FOR A REFRIGERATED LOCKER UNIT. William McKinley Baird, Chicago, Ill. Application May 8, 1944, Serial No. 113,511. Term of patent 14 years. (Cl. D67—3.)



The ornamental design for a refrigerated locker unit, substantially as shown.

REFRIGERATION PRODUCTS
Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—Air Conditioning Coils—Industrial Units
Write for New Catalogue
LARKIN COILS, Inc.
519 Memorial Dr., S.E.
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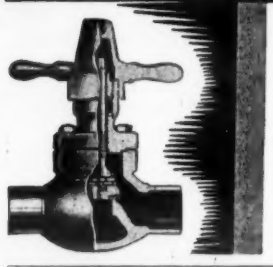
Henry
Wing Cap Valve . . . TYPE 203
NON-FERROUS ALLOY MEETS GOVERNMENT SPECIFICATIONS
Solder connections machined directly in valve body. Has patented rotating self-aligning stem-disc. Resilient packing. Valve is back-seating, permitting repacking under pressure. Wing cap can be inverted and its socket used to operate valve. Cap sealing on bonnet provides additional protection against leaks. Unrestricted flow.
For Freon and Methyl Chloride
HENRY VALVE CO.
1001-19 N. SPAULDING AVE.
CHICAGO, ILLINOIS



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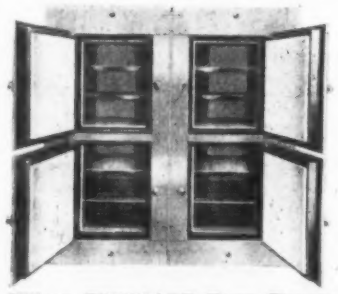
PRIME SURFACE Cold Plates
FOR MAXIMUM EFFICIENT REFRIGERATION
★ For Locker Plants, Sharp Freezing, Ice Cream Cabinets, Hardening Rooms, Soda Fountains, Storage Rooms, Milk Coolers, Liquid Cooling, Food Counters and other similar uses.
Write us today for complete information and catalog.
Stangard Facilities are contributing to the production of materials for our National Defense.
THE STANGARD-DICKERSON CORP.
46-76 Oliver Street, Newark, N. J.

THE RESPONSE HAS BEEN TERRIFIC . . .
WILSON ZEROSAFE
1. From 1939 up to the time government limitation became effective, Wilson Reach-In Farm Freezer production was doubled and redoubled to meet rapidly growing demands.
2. All of the experience gained in years of designing and manufacturing Wilson ZEROSAFE is going into the production of this equipment on a huge new production schedule when the "green light goes on."
WILSON CABINET COMPANY
COMMERCIAL REFRIGERATION EQUIPMENT
SMYRNA DELAWARE
WILSON ALSO MAKES . . .
ZERO-FLOW and VERTI-COIL Milk Coolers
ZEROVAULT Walk-Ins for Frozen Food Storage
ZEROSAFE Reach-Ins for Storing and Dispensing Frozen Foods
NORMAL TEMPERATURE Walk-Ins & Reach-Ins



Wilson ZEROSAFE Farm Freezer
Model FF-60 (Cap. 60 cu. ft.)
Self-Contained Models:
Up to 25 cu. ft.
Sectional Models: Up to 100 cu. ft.

"MOISTURE'S MASTER"
DAVISON'S
SILICA GEL
—USED IN ALL WELL-KNOWN DRYERS
YOUR JOBBER CAN SUPPLY YOU

MIDWEST
Household and Commercial Refrigerator Cabinets
Now Making VITAL War Products for Army and Navy
MIDWEST MFG. COMPANY

The PIONEER FLUID DEHYDRANT
THAWZONE
HIGHSIDE CHEMICALS CO.
195 VERONA AVE. NEWARK, N. J.

Send for Bulletins on Wagner ELECTRIC MOTORS
MU-182 and MU-183
Wagner Electric Corporation
6441 Plymouth Ave., St. Louis 14, Mo., U.S.A.

PAR
COMMERCIAL REFRIGERATION UNITS FOR PROTECTION OF VITAL FOOD SUPPLIES
See Your Par Jobber
LYNCH MANUFACTURING CORP.
DEFIANCE, OHIO, U.S.A.

REFRIGERATION PRODUCTS
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Automatic Pressure, Temperature and Flow Controls
GENERAL CONTROLS
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REFRIGERATION ENGINEERING Inc.
LOS ANGELES - CALIFORNIA

La Crosse Beer Dispensing Equipment with a National reputation for Quality and Performance.
La Crosse Novelty Box Mfg. Co.
LA CROSSE, WISCONSIN

1944
Refrigeration Supply Catalog
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REFRIGERATION EQUIPMENT CO.
101 E. 24th St., Kansas City 8, Mo.

Morley Bros. To Handle Admiral Appliances

SAGINAW, Mich. — Morley Bros. has been named distributor for Admiral Corp. in all of Michigan except the metropolitan Detroit area, according to J. H. Clippinger, Admiral vice president in charge of sales.

Display rooms and warehouses will operated in Grand Rapids, Mich., as well as in Saginaw after the war, by the Morley firm, which was founded in 1863.

Va. Smelting Wins Award for Safety

A. B. BUTT, JR.

* * *

WEST NORFOLK, Va.—For its record of more than a million man-hours of work without a lost-time accident (from March 28, 1942 to May 2, 1944), Virginia Smelting Co. here was awarded the American Mutuel safety trophy at the Statewide Safety Conference recently.

The citation put Virginia Smelting in top position among 22 chemical plants in the state of Virginia, and high in national scoring for chemical plants of equivalent classification, according to A. B. Butt, Jr., plant personnel director and safety committee chairman.

Virginia Smelting also expects to receive its second annual National Safety Council citation for exemplary safety performance, it was said.

No Relief Seen In Plumbing & Heating

WASHINGTON, D. C.—In view of the demands upon the industry, plumbing and heating manufacturers see no early hope for the expansion of their civilian production, the Plumbing and Heating Industry Advisory Committee has reported to WPB.

Committee members, however, expressed the need for speedy authorizations to resume civilian manufacture as soon as cutbacks in military production liberate manpower, materials, and facilities.

Committee members discussed the four reconversion orders. These four orders are designed to enable industry to prepare now for limited reconversion, committee members were told.

In a discussion of the second order, which permits manufacturers to produce postwar experimental models, committee members suggested that they also be permitted to develop patterns and dies for new models.

They pointed out that such a provision would enable manufacturers to be prepared to begin production of new models just as soon as civilian production is resumed or expanded. Labor that is not utilized during slumps in war work could be used to develop the new patterns and dies, members said. The industry representatives explained that the $5,000 a month permitted each plant in developing experimental models would go a long way toward getting dies and patterns set up for new models in the plumbing and heating industry.

WPB is making every effort to remove simplification restrictions and permit production of normal products just as soon as the materials supply warrants, a Plumbing and Heating Division official told the committee. Plumbing and heating equipment still subject to simplification restrictions include plumbing fixture fittings and trim and traps for radiators, the official said.

Refrigerator Top Choice Of Buffalo Consumers

BUFFALO—When the war is won and electrical equipment again is available to the public, Buffalo area residents will buy more electric refrigerators than any other household appliance on the basis of their replies to a survey just completed by the Buffalo Niagara Electric Corp.

In fact, electric refrigerators run 30% higher than the second choice—washing machines—and more than double the third place appliance, radios.

As a means of testing the public's wants, the utility conducted a poll by mail.

DOLE
VACUUM PLATE
COOLING and FREEZING UNITS
CHICAGO

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber since 1928
Your letterhead will bring our latest catalog—also our House Organ, "The Liquid Line"
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RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

EQUIPMENT WANTED

USED EQUIPMENT WANTED: Air conditioning and refrigeration systems and machinery including self-contained units, coils, high-sides, shell and tube coolers and controls. Highest cash for large sizes. We urgently need two 15 HP motors and two compressors without condensers. E. M. FAIRBANKS CO., 475 Fifth Ave., New York 17, N. Y.

WANTED one ice maker for G. E. H. C.—32S.4. Storage Cabinet 22 x 22 opening. New or clean used. Blower unit (new) for same cabinet for sale. LONG ISLAND REFRIGERATION CENTER, INC., 16 Wall St., Huntington, L. I., N. Y.

WE NEED ⅛, ½, ¾, and 1 H.P., 25 cycle motors, suitable for refrigeration service, single phase, 110 or 220 volts. HALLE ELECTRIC COMPANY, Colorado Springs, Colorado.

EQUIPMENT FOR SALE

AMMONIA COMPRESSOR 6 x 6 with 15 H.P., 220 V., 3 ph., motor, ammonia receiver, direct expansion coil, control equipment, and valves. O. T. WOOD, 395 High Steet, Clinton, Mass.

ICE REFRIGERATED bottle coolers. Three-case capacity. Streamlined. All steel, heavily insulated. Casters. Also, for cooling fish, storing cracked ice, etc. Suitable for homes. $19.00 net, F.O.B. Philadelphia. New. No Priority. Streamlined. 100 bottle capacity size, $36.50 net. Convertible for mechanical operation. GENERAL REFRIGERATOR COMPANY, 5400 Eadom Street, Philadelphia 37, Pa.

BEER COOLERS, direct draw for 2 half barrels. Brand new. $325.00, F.O.B. Philadelphia, Pa. Milk coolers, 4 and 6 can capacity. Self contained with General Electric condensing units. 68 cubic foot. Hussman Porcelain reachin. Call Rittenhouse 6359 or write JORDON REFRIGERATOR COMPANY, 235-237 North Broad St., Philadelphia 7, Pa.

FOR SALE: Milk Coolers, Bottle Coolers, converted Freezers. 1,000 complete High-Sides Frigidaire, Kelvinator ¼ H.P. to 2 H.P. Motors up to 5 H.P. send for list and price. EDISON COOLING CORPORATION, 310 E. 149th St., New York, N51, New York.

OFFERING QUANTITY of used Frigidaire model K ⅓ H.P. condensing units. All units checked and in running condition; $34.50. Box 1594 Air Conditioning & Refrigeration News.

FOR SALE: one 30 KW generator 220-3-60 complete with one eight-cylinder Lycoming gas engine; one four-cylinder Lycoming gas engine complete switch board starting batteries and engine basis; individual clutch from each engine. Engines have been completely overhauled. Priced for quick sale. RIO REFRIGERATION CO., Harlingen, Texas.

8-12-16 Cubic feet freezer cabinets. American diffuser coils. OC 58-5200 at 10° condensing units. ¼ to 2 H.P. Air and water cooler Seeger 30 cubic feet reach-in refrigerators. Pedestal, electric fans 24 inch. Priced for dealers. ADVANCE REFRIGERATION, 103 Lexington Ave., New York, N. Y.

NEW AND used-reconditioned Temprite beer coolers. 2 and 3 tap. $50 and $25 respectively. New Russ Basement draw 2 tap beer cooler. $125 all F.O.B. Missoula, Montana. MISSOULA REFRIGERATION CO.

POSITIONS AVAILABLE

SALES ENGINEER is needed by Central States parts jobber; good salary and commission. This is a permanent position with postwar future. Must have complete knowledge of domestic and commercial refrigeration. Give complete information in your application. Box 1592, Air Conditioning & Refrigeration News.

RESPONSIBLE MID-SOUTH manufacturer making complete line for Store Installations wants manufacturing executive familiar with Commercial refrigeration who can supervise design and operation of wood working plant manufacturing wall shelving and a complete line of refrigerated Equipment. Operation offers an unusual postwar opportunity. Box 1579, Air Conditioning & Refrigeration News.

UNUSUAL OPPORTUNITY for refrigeration draftsmen and engineers. Large, firmly established manufacturing company at Chicago, Illinois. Please outline your education and experience to us in your first letter; also, salary expected. Those engaged in defense work cannot be considered. Box 1606, Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE engineer capable taking charge of commercial refrigeration service department, supervise installations. Good working conditions; good pay; permanent position. A. F. BRIGGS, 369 Forest Ave., Portland, Me.

PROCESS ENGINEERS either mechanical or electrical with technical or practical training. Must have at least five years' general industrial experience. Excellent opportunities with long established refrigerator manufacturer. In replying give qualifications and past experience. Box 1605, Air Conditioning & Refrigeration News.

WANTED a man to take charge of service department of six employes. Complete knowledge of refrigeration not absolutely essential but knowledge of control of men is required. HARROD REFRIGERATION SALES, 201-205 North Jackson, Jackson, Mich.

POSITIONS WANTED

EXPERIENCED man commercial refrigeration, air conditioning with following abilities: application engineering, promotional and merchandising, executive and personnel experience, ambition, business experience, handling of distributors and all types of manpower, credit experience, sales volume production; interested in position with manufacturer or distributor. Best references. Must offer future. Box 1600, Air Conditioning & Refrigeration News.

REFRIGERATION MAN, located New York City, with many years servicing experience, knowledge engineering, layout, special applications, etc., wishes position as Sales or Field Engineer, Service Supervisor, or some similar position where practical knowledge of refrigeration is of value. Particularly desirous of post-war opportunity. Box 1608, Air Conditoning & Refrigeration News.

FRANCHISES WANTED

LEADING JOBBERS South Africa, established connection, want to contact manufacturers and/or representatives all types refrigeration and air conditioning accessories including Fractional Horse Power Electric Motors and components with view to representing them and marketing their products Southern Africa. Box 1599, Air Conditioning & Refrigeration News.

Use CHICAGO SEALS for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

ELECTRIC WATER COOLERS
ALL SIZES FOR NAVY AND LAND USE
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QUICK SHIPMENT
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WANTED IMMEDIATELY
Experienced air conditioning and industrial refrigeration service engineer with engineering education, capable of analyzing and supervising. Permanent position. Write the Supervisor, Technical Employment, Union Bank Building, Pittsburgh 22, Pennsylvania.
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FOR ALL TYPES OF REFRIGERATORS
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ICE-X
TRADE MARK REG. U.S. PAT. OFF.
ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems ...The dependable liquid anti-freeze.
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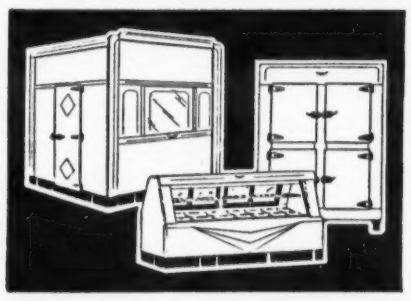
THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS
JOBBERS: WRITE FOR SPECIAL PROPOSITION!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OUR POST-WAR PLANS SPELL OPPORTUNITY FOR You.
DON'T DELAY --- CONTACT US NOW
REACH-INS, WALK-INS, AND OTHER ITEMS NOW AVAILABLE
INQUIRE ABOUT OUR PROPOSITION TO DISTRIBUTORS and FACTORY REPRESENTATIVES
FOGEL REFRIGERATOR COMPANY 5400 Eadom St., Philadelphia 37, Pa. Since 1899

★ This is EARL KENT, General Works Manager of Tyler plants. Head over heels in war production, he still keeps an eye on latest developments and production methods for post-war commercial refrigerators. Earl will have something spectacular to show Tyler agents when they gather at Niles for the first big Post-War Convention and will have his production lines humming with activity on the new models.

TYLER REFRIGERATORS

"Joe Really Believes in Working Close With His Ranco Jobber!"

We don't expect you to take this picture literally, but what we do want to emphasize is this: COOPERATE CLOSELY WITH YOUR RANCO JOBBER. There are many ways he can help you. Perhaps the exact Ranco Replacement Control you want is unavailable at this time. When he must recommend a substitute, accept it cheerfully and confidently, for he will recommend one that is easily adaptable. And, rest assured, that any Ranco Control he suggests is a precision instrument, sturdily made, dependable and accurate in operation.
Ranco Inc. COLUMBUS 1, OHIO

Climate Institute Meets In September To Plan Reconversion

(Concluded from Page 1, Column 3)

election of officers of I.C.I. will be held simultaneously with the Open Forum.

The I.C.I. is organized to assist manufacturers and trade associations in the promotion of controlled indoor climate and is designed to serve as a clearing house of unprejudiced information. At a Board of Directors Meeting held in Minneapolis, July 20, the activities of the various committees were reviewed and extensive plans made to use seminars during the Open Forum when committee chairmen will review the plans and objectives of the respective committees with members of the related industries participating in the discussions. The seminars will be devoted to the following subjects:

Editors' Panel (Public Information Committee); Local Chapter Activities (Local Chapters Committee); Training for Postwar Jobs (Postwar Personnel & Training Committee); Trade Associations' Interest and Participation in the I.C.I. Program (Trade Associations' Committee); Speakers' Bureau Activities (Speakers' Bureau Committee); Science Groups' Interest and Participation in the I.C.I. Program (Science Committee); General Promotion of the I.C.I. Program (Promotion Committee).

A special Open Forum Committee met at I.C.I. headquarters in the Penobscot Building, Detroit, on Aug. 3. A program for the two day Forum was drafted which will assure a very down-to-earth, brass tacks type of clinic covering all aspects of those factors that must be considered in appraising the gigantic, educational job to be done with the public and all branches of the building industry if the members of the heating, cooling, and air conditioning industries are to obtain their proper share of the construction dollar.

National leaders in reconversion planning will highlight the business sessions, the luncheon and banquet on Sept. 21. Group seminars will be held Friday morning, Sept. 22. The annual election will take place in the afternoon.

With the war in Europe reaching a termination stage, officers and committee chairmen of I.C.I. realize the importance of timing the activities of I.C.I. with the anticipated early, renewed activity in the building industry. As a most important phase of the I.C.I. program, seven different publication groups are cooperating in comprehensive surveys, information from which will serve as a basis for promotional and educational activities to be sponsored by the Institute.

An Editors' Panel, composed of those editors cooperating with I.C.I. in its joint research, together with the secretaries of the various trade associations, will constitute a special type of counsel that will assure far-reaching benefits for the public and the related industries. The formation of local chapters and the establishments of a Speakers Bureau will carry the work of I.C.I. to every community throughout the Nation.

One of the Institute's major activities will be a program of cooperation with industries, institutions of learning and the government in postwar personnel training. This is a much needed service in the reemployment of returning fighters and should prove of inestimable value.

The Science Committee, likewise, has a program which will bring to editors, publishers, writers, authors, and I.C.I. members a new type of dependable information dealing with the scientific developments in the field of controlled indoor climate.

Special Certification A Must For 'Freon'

WASHINGTON, D. C. — Where special authorization for "Freon-12" is granted by WPB, as in some cases of windowless buildings and sick rooms, the applicant must furnish his supplier with the special authorization *and* the certification required under paragraph (c) (2) of Order M-28, according to an amendment to that order issued Aug. 21.

The standard certification in the form described in Priorities Regulation 7 cannot be used instead of the one described in Order M-28.

Dehydrated Foods May Do Fadeout

CHICAGO—Postwar prospects for dehydrated foods don't look rosy to the Agricultural Department's Bureau of Agricultural Economics, which just conducted a survey of housewives here.

Presented with free samples of dehydrated products, Chicago housewives found that their families would accept them as a substitute, but very few actually preferred them to fresh or canned foods. Only a big difference in price could overcome this preference, the survey showed.

Commercial markets for dehydrated foods were not studied. Pie bakers, confectioners, hotels, and restaurants should prove good customers, however.

50% Solder Can Be Had For Repairs

(Concluded from Page 1, Column 4)

any solder from any manufacturer or wholesale distributor, unless the user shall have furnished the manufacturer or wholesale distriubtor with the following certificate:

"The undersigned purchaser certifies, subject to the penalties of section 35 (A) of the United States Criminal Code, to the seller and to the War Production Board, that the tin contained in the material covered by this order shall be used solely for the purpose listed in schedule .... section .... of General Preference Order M-43, or is to be incorporated in an 'Implement of War' and the tin content of the material has been definitely specified."

Gaisford Heads Marsh Export Department

CHICAGO — The Jas. P. Marsh Corp. has announced the appointment of R. S. Gaisford as manager of the Marsh export department located at 155 E. 44th St., New York City. Mr. Gaisford has been eastern division manager of the Jas. P. Marsh organization.

Delco Executives Named

ROCHESTER, N. Y.—M. Lawrence Judd has been appointed sales manager of appliances, and Charles E. Smith, assistant sales manager in charge of oil heating equipment for the Delco Appliance Division of General Motors Corp. here.

Commodity Pricing To Hold In Reconversion

(Concluded from Page 1, Column 3)

as one item that might come out priced on new standards.

Pointing out that the general price level is now up about 10% over 1942, Mr. Bowles said that if an item comes onto the market priced at about 10% over the 1942 prices, it would be on the level with the general price levels of today.

Price controls will probably be removed industry by industry, as conditions stabilize themselves, rather than waiting and keeping all goods under price control which would be lifted at one particular time, the OPA chief said.

IT'S IN THE CARDS . . .

When the war is won you're due to hit the jack-pot. There's no gamble involved. It's a sure thing . . . fixed. It's in the cards!

The sky's the limit in post-war expansion . . . a sky full of refrigerated and conditioned air. Fortunes have been founded on foresight . . . but you don't need a crystal ball to look into YOUR future. Astor foresaw the future of Manhattan . . . Vanderbilt the railroads . . . Duke the cigarette . . . Zukor the movies . . . and thousands with them were swept upward to success. Refrigeration is due to pay off . . . so take a hand!

When production lines shift from destruction to construction this infant industry will shoot to full stature overnight . . . the beanstalk of business . . . Refrigeration has come to stay in industry . . . in business . . . in the home. Yesterday's luxury has become tomorrow's necessity. Refrigeration has dealt you the right cards . . . perfect cards. Be sure that you play them right!

The Bush Manufacturing Company, Hartford, Connecticut. 415 Lexington Avenue, New York 549 West Washington Boulevard, Chicago. **BUY WAR BONDS.**

PENGUIN PETE

BUSH

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